# Part 1 – Personnel Licensing

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CHAPTER 1 – DEFINITIONS AND GENERAL RULES CONCERNING LICENCES

Definitions

The following terms are used in Kuwait Civil Aviation Safety Regulations (KCASR’s) for Personnel Licensing, they have the following meanings:-

**Accredited Medical Conclusion.** The conclusion reached by one or more medical experts acceptable to the DGCA for the purpose of the case concerned, in consultation with flight operations or other experts as necessary.

**Aeroplane.** A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces, which remain, fixed under given conditions of flight.

**Aircraft.** Any machines that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth’s surface.

**Aircraft Avionics.** A term designating any electronic device, including its electrical part, for use in an aircraft, including radios, automatic flight control and instrument systems.

**Aircraft – Category.** Classification of aircraft according to specified basic characteristics, e.g. Aeroplane, helicopter, glider, free balloon.

**Aircraft certificated for Single-Pilot Operation.** A type of aircraft which the State of Registry has determined, during the certification process, can be operated safely with a minimum crew of one pilot.

**Aircraft required to be operated with a Co-pilot.** A type of aircraft that is required to be operated with a co-pilot, as specified in the flight manual or by the air operator certificate.

**Aircraft – type of.** All aircraft of the same basic design including all modifications thereto except those modifications which result in a change in handling or flight characteristics.

**Airmanship.** The consistent use of good judgment and well developed knowledge, skills and attitudes to accomplish flight objectives.

**Airship.** A power-driven lighter-than-air aircraft.

**Appropriate Authority (TAA) is an authority which is accepted by DGCA to carry on the Qualification of a FSTD.**

**Approved Maintenance Organization.** An organization approved by the Kuwait DGCA, in accordance with the requirements of Annex 6, Part I, Chapter 8 — Aeroplane Maintenance, to perform maintenance of aircraft or parts thereof and operating under supervision approved by the DGCA.

*Note:* Nothing in this definition is intended to preclude that the organization and its supervision be approved by more than one State.

**Approved Training.** Training conducted under special curricula and supervision approved by the DGCA.

**Approved Training Organization.** An organization approved by the DGCA in accordance with the requirements of this Part to perform flight crew training and operating under the supervision of Kuwait DGCA.

**ATS Surveillance Service.** A term used to indicate a service provided directly by means of an ATS surveillance system.
ATS Surveillance System. A generic term meaning variously, ADS-B, PSR, SSR or any comparable ground-based system that enables the identification of aircraft.

Note: A comparable ground-based system is one that has been demonstrated, by comparative assessment or other methodology, to have a level of safety and performance equal to or better than monopulse SSR.

Balloon. A non-power-driven lighter-than-air aircraft.

Note: For the purposes of this Part, this definition applies to free balloons.

Certify as Airworthy (to). To certify that an aircraft or parts thereof comply with current airworthiness requirements after maintenance has been performed on the aircraft or parts thereof.

Commercial Air Transport Operation. An aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire.

Competency. A combination of skills, knowledge and attitudes required to perform a task to the prescribed standard.

Competency Element. An action that constitutes a task that has a triggering event and a terminating event that clearly defines its limits, and an observable outcome.

Competency Unit. A discrete function consisting of a number of competency elements.

Co-Pilot. A Licensed pilot serving in any piloting capacity other than pilot-in-command but excluding a pilot who is on board the aircraft for the sole purpose of receiving flight instructions.

Credit. Recognition of alternative means or prior qualifications.

Cross-country. A flight between a point of departure and a point of arrival following a pre-planned route using standard navigation procedures.

DGCA- ASD. Directorate General of Civil Aviation – Aviation Safety Department.

Dual Instruction Time. Flight time during which a person is receiving flight instructions from a properly authorized pilot on board the aircraft.

Error. An action or inaction by an operational person that leads to deviations from organizational or the operational person’s intentions or expectations.

Note: See Attachment E of KCASR’s Part 13 — Aircraft Accident and Incident Investigation for a description of operational personnel.

Error Management. The process of detecting and responding to errors with countermeasures that reduce or eliminate the consequences of errors and mitigate the probability of further errors or undesired states.

Note: See Attachment C to Chapter 3 of the Procedures for Air Navigation Services Training (PANS-TRG, Doc 9868) and Circular 314 — Threat and Error Management (TEM) in Air Traffic Control* for a description of undesired states.

Flight Crew Member. A Licensed crew member charged with duties essential to the operation of an aircraft during flight time.

Flight Plan. Specified information provided to air traffic service units, relative to an intended flight or portion of a flight of an aircraft.

Flight Procedures Trainer. See flight simulation training device.
Flight Simulation Training Device (FSTD). Any one of the following three types of apparatus in which flight conditions are simulated on the ground:

A flight simulator, which provides an accurate representation of the flight deck of a particular aircraft type to the extent that the mechanical, electrical, electronic, etc. aircraft systems control functions, the normal environment of flight crew members, and the performance and flight characteristics of that type of aircraft are realistically simulated;

A flight procedures trainer, which provides a realistic flight deck environment, and which simulates instrument responses, simple control functions of mechanical, electrical, electronic, etc. aircraft systems, and the performance and flight characteristics of aircraft of a particular class;

A basic instrument flight trainer, which is equipped with appropriate instruments, and which simulates the flight deck environment of an aircraft in flight in instrument flight conditions.

Flight Simulator. See Flight simulation training device.

Flight Time - Aeroplane. The total time from the moment an aircraft first moves under its own power for the purpose of taking off until the moment it finally comes to rest at the end of the flight.

Note: Flight time as here defined is synonymous with the term “block to block” time or “chock to chock” time in general usage which is measured from the time an aeroplane first moves for the purpose of taking off until it finally stops at the end of the flight.

Flight Time – Helicopter. The total time from the moment a helicopter’s rotor blades start turning until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stopped.

Glider. A non-power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

Glider Flight Time. The total time occupied in flight, whether being towed or not, from the moment the glider first moves for the purpose of taking off until the moment it come to rest at the end of the flight.

Helicopter. Heavier than air, aircraft supported in flight chiefly by the reactions of the air on one or more power driven rotors on substantially vertical axis.

Human Performance. Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

Instrument Flight Time. Time during which a pilot is piloting an aircraft solely by reference to instruments and without external reference points.

Instrument Ground Time. Time during which a pilot is practicing, on the ground, simulated instrument flight in a synthetic flight trainer approved by DGCA/ASD.

Instrument Time. Instrument flight time or instrument ground time.

KCASR. Kuwait Civil Aviation Safety Regulations

Licensing Authority. The authority designated by Kuwait DGCA as responsible for the Licensing and certification of personnel.

Likely. In the context of the medical provisions in Chapter 6, likely means with a probability of occurring that is unacceptable to the Medical Assessor.
Maintenance. The performance of tasks required to ensure the continuing airworthiness of an aircraft including any one or combination of overhaul, repair, inspection, replacement, modification or defect rectification, and embodiment of a modification or repair.

Medical Assessment. The evidence issued to indicate that the License holder meets specific requirements of medical fitness.

Medical Assessor. A physician, appointed by DGCA, qualified and experienced in the practice of aviation medicine and competent in evaluating and assessing medical conditions of flight safety significance.

Note1: Medical assessors evaluate medical reports submitted to DGCA by medical examiners.

Note2: Medical assessors are expected to maintain the currency of their professional knowledge.

Medical Examiner. A physician with training in aviation medicine and practical knowledge and experience of the aviation environment, who is designated by the DGCA to conduct medical examinations of fitness of applicants for License or ratings for which medical requirements are prescribed.

Night. The time between half an hour after sunset and half an hour before sunrise (both times inclusive).

Performance Criteria. Simple, evaluative statements on the required outcome of the competency element and a description of the criteria used to judge whether the required level of performance has been achieved.

Pilot (to). To manipulate the flight controls of an aircraft during flight time.

Pilot-in-Command. The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

Pilot-in-Command under Supervision. Co-pilot performing, under the supervision of the pilot-in-command, the duties and functions of a pilot-in-command, in accordance with a method of supervision acceptable to DGCA.

Powered-Lift. A heavier-than-air aircraft capable of vertical take-off, vertical landing, and low-speed flight, which depends principally on engine-driven lift devices or engine thrust for the lift during these flight regimes and on non-rotating aerofoil(s) for lift during horizontal flight.

Problematic Use of Substances. The use of one or more psychoactive substances by aviation personnel in a way that:

a) Constitutes a direct hazard to the user or endangers the lives, health or welfare of others; and/or

b) Causes or worsens an occupational, social, mental or physical problem or disorder.

Proficiency Checks: Demonstrations of skill to revalidate or renew ratings, and including such oral examination as the examiner may require.

Psychoactive Substances. Alcohol, opioids, cannabinoids, sedatives and hypnotic, cocaine, other psycho-stimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded.

Quality System. Documented organizational procedures and policies; internal audit of those policies and procedures; management review and recommendation for quality improvement.
**Rating.** An authorization entered on or associated with a License and forming part thereof, stating special conditions, privileges or limitations pertaining to such License.

**Rated Air Traffic Controller.** An air traffic controller holding a licence and valid ratings appropriate to the privileges to be exercised.

**Rendering (a License) Valid.** The action taken by Kuwait DGCA, as an alternative to issuing its own License, in accepting a License issued by any other contracting state as the equivalent of its own License.

**Renewal of a Rating, Certificate or Approval.** The administrative action taken after a rating, certificate, or approval has lapsed that renews the privileges of the rating, certificate or approval for a further specified period consequent upon the fulfillment of specified requirements.

**Revalidation of a Rating, Certificate or Approval.** The administrative action taken within the period of validity of a rating, certificate or approval that allows the holder to continue to exercise the privileges of a rating, certificate or approval for a further specified period consequent upon the fulfillment of specified requirements.

**Safety Management System.** A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.

**Sign a Maintenance Release (to).** To certify that maintenance work has been completed satisfactorily in accordance with the applicable standards of airworthiness, by issuing the maintenance release referred to in Part 6.

**Significant.** In the context of the medical provisions in Chapter 6, significant means to a degree or of a nature that is likely to jeopardize flight safety.

**Solo Flight Time.** Flight time during which a student pilot is the sole occupant of the aircraft.

**State Safety Programme.** An integrated set of regulations and activities aimed at improving safety.

**Threat.** Events or errors that occur beyond the influence of an operational person, increase operational complexity and must be managed to maintain the margin of safety.

*Note:* See Attachment E of KCAR Part 13 — Aircraft Accident and Incident Investigation for a description of operational personnel.

**Threat Management.** The process of detecting and responding to threats with countermeasures that reduce or eliminate the consequences of threats and mitigate the probability of errors or undesired states.

*Note:* See Attachment C to Chapter 3 of the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868) and Circular 314 Threat and Error Management (TEM) in Air Traffic Control for a description of undesired states.
General Rules Concerning Personnel Licensing, Certification and Authorization.

1. Licensing Authority

1) Kuwait Directorate General of Civil Aviation, Aviation Safety Department (DGCA/ASD) is the designated and empowered Department for the following:
   i) Assessment of an applicant’s qualifications to hold a License, rating, or certificate;
   ii) Issue, renewal and endorsement of Licenses, ratings and certificates;
   iii) Designation and authorization of approved persons;
   iv) Approval of training organization and training programs;
   v) Approval of the use of synthetic flight trainers and authorization for their use in gaining the experience or in demonstrating the skill required for the issue of a License or rating; and
   vi) Renewal or revalidation of License, certificate or approvals;
   vii) Rendering a License valid issued by other contracting states;
   viii) Suspension, withdrawal, or revoke of License or certificate;

2) The personnel Licenses and certificates issued are in conformance with ICAO standards set in Annex 1 and with reference to the related ICAO documents.

3) Requirements and procedures for the issuance and re-validation of personnel Licenses and certificates are as detailed in DGCA Personnel Licensing Procedures Manual.

4) The designated and authorized persons to sign each part of the License or certificate are as per Licensing Procedures and Requirement Manual.

5) The Licensing authority shall suspend, withdraw or revoke the Licenses, certificates or ratings issued under this part, if the holder of any of the Licenses, certificates or ratings did not comply or violated any regulation that governs the issuance of the Licenses, certificates or rating, or the maintenance of its validity as per regulation set in Part 6 of Kuwait Civil Aviation Safety Regulation (KCASR).

1.1 Article 83 Bis

Note: Although the Convention on International Civil Aviation allocates to the State of Registry certain functions which that State is entitled to discharge, or obligated to discharge, as the case may be, the Assembly recognized, in Resolution A23-13, that the State of Registry may be unable to fulfill its responsibilities adequately in instances where aircraft are leased, chartered or interchanged — in particular without crew — by an operator of another State and that the Convention may not adequately specify the rights and obligations of the State of an operator in such instances until such time as Article 83 bis of the Convention enters into force. Accordingly, the Council urged that if, in the abovementioned instances, the State of Registry finds itself unable to discharge adequately the functions allocated to it by the Convention, it delegate to the State of the Operator, subject to acceptance by the latter State, those functions of the State of Registry that can more adequately be discharged by the State of the Operator. While Article 83 bis of the Convention entered into force on 20 June 1997 in respect of Contracting States which have ratified the related Protocol (Doc 9318), the foregoing action will remain particularly relevant for those Contracting States which do not have treaty relations under Article 83 bis. It was understood that pending entry into force of Article 83 bis of the Convention, the foregoing action would only be a matter of practical convenience and would not affect either the provisions...
of the Chicago Convention prescribing the duties of the State of Registry or any third State. However, as Article 83 bis of the Convention entered into force on 20 June 1997, such transfer agreements will have effect in respect of Contracting States which have ratified the related Protocol (Doc 9318) upon fulfillment of the conditions established in Article 83 bis.

**Note2:** State of Kuwait had ratified Article 83bis of Chicago Convention, in regard to delegation of responsibilities in instances where aircraft are leased, chartered, or interchanged in particular without crew, with any ICAO member state that had ratified this article. (Refer Part 25, Chapter 1)

### 1.2 KCASR’s are established for licensing the following personnel:

**a)** **Flight crew**
- private pilot — aeroplane, airship, helicopter or powered-lift; (currently Kuwait DGCA do not issue private pilot license).
- commercial pilot — aeroplane, airship, helicopter or powered-lift;
- multi-crew pilot — aeroplane;
- airline transport pilot — aeroplane, helicopter or powered-lift
- glider pilot; (currently Kuwait DGCA do not issue glider pilot license).
- free balloon pilot; (currently Kuwait DGCA do not issue free balloon pilot license).
- flight navigator; (currently Kuwait DGCA do not issue navigator license).
- flight engineer.
- Authorized Instructors/Examiners (Certificate)

**b)** **Other personnel**
- Cabin Crew Member (Certificate)
- aircraft maintenance (technician/engineer/mechanic);
- air traffic controller;
- flight operations officer/flight dispatcher;
- Radio Operator Certificate;
- aeronautical station operator.

### 1.2.1 Authority to act as a Flight Crew Member

A person shall not act as a flight crew member of an aircraft unless a valid licence is held showing compliance with the specifications of this Part and appropriate to the duties to be performed by that person. The licence shall have been issued by DGCA or by any other Contracting State and rendered valid by DGCA.

**Note:** Article 29 of the Convention on International Civil Aviation requires that the flight crew members carry their appropriate licences on board every aircraft engaged in international air navigation.
1.2.2 Method of rendering a licence valid

1.2.2.1 When Kuwait DGCA renders valid a licence issued by another Contracting State, as an alternative to the issuance of a Kuwaiti License, to meet specific demand for a temporary period and at the request of the Air Operator, a written authorization “Certificate of Validation” shall be issued and carried with the original License accepting it as an equivalent to Kuwait DGCA License. When a DGCA limits the authorization to specific privileges, the authorization shall specify the privileges of the licence which are to be accepted as its equivalent. The validity of the authorization shall not extend beyond the period of validity of the licence. The authorization ceases to be valid if the licence upon which it was issued is revoked or suspended.

1.2.2.2 The validity of the authorization shall be for a maximum period of 12 months, and shall not extend beyond the period of validity of the original License.

1.2.2.3 The holder of the authorization shall strictly adhere to the privileges specified in the authorization.

1.2.2.4 Procedures and requirements for rendering a License valid are as detailed in DGCA Personnel Licensing Procedures Manual.

1.2.2.5 Kuwait DGCA may render valid pilot License issued by other contracting State for use in private flight.

Note: DGCA, without formality, when render valid a licence issued by another Contracting State for use in private flights may notify this facility in the Aeronautical Information Publications.

1.2.2.6 Licenses based on Military Qualification

The Directorate General of Civil Aviation permits the knowledge, experience and skill gained in military service to be credited towards the relevant requirements for the issuance of DGCA licenses and ratings.

The "Personnel Licensing Procedures Manual" determines the scope and level of accreditation that can be granted to suitably experienced Kuwait Air force pilots.

1.2.2.7 Licenses and Certificates issued to Non-Kuwaiti Pilots, Flight Engineers and Authorized Examiners.

Licenses and Certificates are issued to a person who is not a Kuwaiti citizen under this part only when he is employed by a firm holding an AOC issued by Kuwait DGCA and required for the operation of a Kuwaiti registered civil aircraft or is required to conduct training and tests for pilots and flight engineers who are holding a Kuwait DGCA License.

1.2.3 Privileges of the holder of a License.

A person shall not exercise the privileges of a License, certificate or rating issued by Kuwait DGCA, unless it is held valid and in possession and showing compliance with the specification of Kuwait DGCA Licensing rules and appropriate to the duties to be performed by that person.

1.2.3.1 Authority to act as a holder of a License or certificate (Other than a flight crew member).

A person shall not exercise the privileges of a License, certificate or rating issued by Kuwait DGCA, unless it is held valid and in possession and showing compliance with the specification of Kuwait DGCA Licensing rules and appropriate to the duties to be performed by that person.
1.2.4 Medical Fitness.

**Note1:** Guidance material is published in the Manual of Civil Aviation Medicine (Doc 8984).

**Note2:** To satisfy the licensing requirements of medical fitness for the issue of various types of Licenses, the applicant must meet certain appropriate medical requirements which are specified as three classes of Medical Assessment. Details are given in 6.2, 6.3, 6.4 and 6.5. To provide the necessary evidence to satisfy the requirements of 1.2.4.1, the Licensing Authority issues the License holder with the appropriate Medical Assessment, Class 1, Class 2 or Class 3. This can be done in several ways such as a suitably titled separate certificate, a statement on the License, a national regulation stipulating that the Medical Assessment is an integral part of the License, etc.

1.2.4.1 An applicant for a License shall, when applicable, hold a medical assessment issued in accordance with the provisions laid down on Chapter 6 of this Part.

1.2.4.2 DGCA shall apply, as part of their State safety programme, basic safety management principles to the medical assessment process of licence holders, that as a minimum include:-

a) routine analysis of in-flight incapacitation events and medical findings during medical assessments to identify areas of increased medical risk; and

b) continuous re-evaluation of the medical assessment process to concentrate on identified areas of increased medical risk.

**Note:** A framework for the implementation and maintenance of a State safety programme is contained in Attachment C. Guidance on State safety programmes and safety management principles is contained in the Safety Management Manual (SMM) (Doc 9859) and the Manual of Civil Aviation Medicine (Doc 8984).

1.2.4.3 The period of validity of a Medical Assessment shall begin on the day the medical examination is performed. The duration of the period of validity shall be in accordance with the provisions of 1.2.5.2.

1.2.4.3.1 The period of validity of a Medical Assessment may be extended, at the discretion of AME, up to 45 days after obtaining prior approval from DGCA.

**Note:** It is advisable to let the calendar day on which the Medical Assessment expires remain constant year after year by allowing the expiry date of the current Medical Assessment to be the beginning of the new validity period under the proviso that the medical examination takes place during the period of validity of the current Medical Assessment but no more than 45 days before it expires.

1.2.4.4 Flight crew members or air traffic controllers shall not exercise the privileges of their licence unless they hold a current Medical Assessment appropriate to the licence.

1.2.4.5 DGCA shall designate medical examiners, qualified and licensed in the practice of medicine, to conduct medical examinations of fitness of applicants for the issue or renewal of the licences or ratings specified in Chapters 2 and 3, and of the appropriate licences specified in Chapter 4.

1.2.4.5.1 Medical examiners shall have received training in aviation medicine and shall receive refresher training at regular intervals. Before designation, medical examiners shall demonstrate adequate competency in aviation medicine.

1.2.4.5.2 Medical examiners shall have practical knowledge and experience of the conditions in which the holders of licences and ratings carry out their duties.

**Note:** Examples of practical knowledge and experience are flight experience, simulator experience, on-site observation or any other hands-on experience deemed by DGCA to meet this requirement.
1.2.4.5.3 The competence of a medical examiner shall be evaluated periodically by the DGCA medical assessor.

1.2.4.6 Applicants for licences or ratings for which medical fitness is prescribed shall sign and furnish to the medical examiner a declaration stating whether they have previously undergone such an examination and, if so, the date, place and result of the last examination. They shall indicate to the examiner whether a Medical Assessment has previously been refused, revoked or suspended and, if so, the reason for such refusal, revocation or suspension.

1.2.4.6.1 Any false declaration to a medical examiner made by an applicant for a licence or rating shall be reported to DGCA for such action as may be considered appropriate.

1.2.4.7 Having completed the medical examination of the applicant in accordance with Chapter 6, the medical examiner shall coordinate the results of the examination and submit all original documents including the applications, medical examination forms, electrocardiogram (ECG) and copy of the signed medical certification, and any other equivalent investigations or reports needed, to DGCA, in accordance with its requirements, detailing the results of the examination and evaluating the findings with regard to medical fitness.

1.2.4.7.1 If the medical report is submitted to DGCA in electronic format, adequate identification of the examiner shall be established.

1.2.4.7.2 If the medical examination is carried out by two or more medical examiners, DGCA shall appoint one of these to be responsible for coordinating the results of the examination, evaluating the findings with regard to medical fitness, and signing the report.

1.2.4.8 DGCA shall use the services of medical assessors to evaluate reports submitted to the Licensing Authorities by medical examiners.

1.2.4.8.1 The medical examiner shall be required to submit sufficient information to DGCA to undertake Medical Assessment audits in accordance to 1.2.4.7.

Note: The purpose of such auditing is to ensure that medical examiners meet applicable standards for good medical practice and aeromedical risk assessment. Guidance on aeromedical risk assessment is contained in the Manual of Civil Aviation Medicine (Doc 8984).

1.2.4.9 If the medical Standards prescribed in Chapter 6 for a particular licence are not met, the appropriate Medical Assessment shall not be issued or renewed unless the following conditions are fulfilled:-

a) accredited medical conclusion indicates that in special circumstances the applicant’s failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the licence applied for is not likely to jeopardize flight safety;

b) relevant ability, skill and experience of the applicant and operational conditions have been given due consideration; and

c) the licence is endorsed with any special limitation or limitations when the safe performance of the licence holder’s duties is dependent on compliance with such limitation or limitations.

1.2.4.10 Medical confidentiality shall be respected at all times.
1.2.4.10.1 All medical reports and records shall be securely held with accessibility restricted to authorized personnel.

1.2.4.10.2 When justified by operational considerations, the medical assessor shall determine to what extent pertinent medical information is presented to relevant officials of DGCA.

1.2.5 Validity of Licenses.

1.2.5.1 A License, certificate or rating holder shall not exercise the privileges of the granted License, certificate or rating unless he maintains competency and meets the requirements for recent experience as stated in KCASR’s Part 6.

1.2.5.1.1 DGCA should establish maintenance of competency and recent experience requirements for pilot licences and ratings based on a systematic approach to accident prevention and should include a risk assessment process and analysis of current operations, including accident and incident data appropriate to that State.

1.2.5.1.2 DGCA having issued a licence, shall ensure that other Contracting States are enabled to be satisfied as to the validity of the licence.

1.2.5.1.3 The validity of a License issued by Kuwait DGCA shall be in accordance with the prescribed requirements.

Note1: The maintenance of competency of flight crew members, engaged in commercial air transport operations, may be satisfactorily established by demonstration of skill during proficiency flight checks completed in accordance with Annex 6.

Note2: Maintenance of competency may be satisfactorily recorded in the operator’s records, or in the flight crew member’s personal log book or licence.

Note3: Flight crew members shall to the extent deemed feasible, by the State of Registry, demonstrate their continuing competency in flight simulation training devices approved by that State.

Note4: See the Manual of Criteria for the Qualification of Flight Simulation Training Devices (Doc 9625).

Note5 See the Manual of Procedures for Establishment and Management of a State’s Personnel Licensing System (Doc 9379) for guidance material on the development of a risk assessment process.

1.2.5.2 Except as provided in 1.2.5.2.1, 1.2.5.2.2, 1.2.5.2.3, 1.2.5.2.4, and 1.2.5.2.5, a Medical Assessment issued in accordance with 1.2.4.6 and 1.2.4.7 shall be valid from the date of the medical examination for a period not greater than:-

60 months for the private pilot licence — aeroplane, airship, helicopter and powered lift;
12 months for the commercial pilot licence — aeroplane, airship, helicopter and powered-lift;
12 months for the multi-crew pilot licence — aeroplane;
12 months for the airline transport pilot licence — aeroplane, helicopter and powered-lift;
60 months for the glider pilot licence;
60 months for the free balloon pilot licence;
12 months for the flight navigator licence;
12 months for the flight engineer licence;
48 months for the air traffic controller licence.
24 months for Cabin Crew Member.
Note1: The periods of validity listed above may be extended by AME up to 45 days in accordance with 1.2.4.3.1.

Note2: When calculated in accordance with 1.2.5.2 and its sub-paragraphs, the period of validity will, for the last month counted, include the day that has the same calendar number as the date of the medical examination or, if that month has no day with that number, the last day of that month.

1.2.5.2.1 The period of validity of a Medical Assessment may be reduced when clinically indicated.

1.2.5.2.2 When the holders of airline transport pilot licences — aeroplane, helicopter and powered-lift, and commercial pilot licences — aeroplane, airship, helicopter and powered-lift, who are engaged in single-crew commercial air transport operations carrying passengers, have passed their 40th birthday, the period of validity specified in 1.2.5.2 shall be reduced to six months.

1.2.5.2.3 When the holders of airline transport pilot licences — aeroplane, helicopter and powered-lift, commercial pilot licences — aeroplane, airship, helicopter and powered-lift, and multi-crew pilot licences — aeroplane, who are engaged in commercial air transport operations, have passed their 60th birthday, the period of validity specified in 1.2.5.2 shall be reduced to six months.

1.2.5.2.4 When the holders of private pilot licences — aeroplane, airship, helicopter and powered-lift, free balloon pilot licences, glider pilot licences and air traffic controller licences have passed their 40th birthday, the period of validity specified in 1.2.5.2 shall be reduced to 24 months.

1.2.5.2.5 When the holders of private pilot licences — aeroplane, airship, helicopter and powered-lift, free balloon pilot licences, glider pilot licences and air traffic controller licences have passed their 50th birthday, the period of validity specified in 1.2.5.2 should be further reduced to 12 months.

Note: The periods of validity listed above are based on the age of the applicant at the time of undergoing the medical examination.

1.2.6 Decrease in medical fitness

1.2.6.1 Holders of Licenses or certificates issued in accordance with this Part, shall not exercise the privileges of their Licenses and related rating at any time when they are aware of any decrease in their medical fitness which might render them unable to safely and properly exercise these privileges.

1.2.6.1.1 Licence holders should seek guidelines on medical conditions that may be relevant to flight safety and when to seek clarification or guidance from a medical examiner or Licensing Authority.

Note: Guidance on physical and mental conditions and treatments that are relevant to flight safety about which information may need to be forwarded to the Licensing Authority is contained in the Manual of Civil Aviation Medicine (Doc 8984).

1.2.6.1.2 Holders of License shall not exercise the privileges of their Licenses and related rating during any period in which their medical fitness has, from any cause, decreased to an extent that would have prevented the issue or renewal of their Medical Assessment.

1.2.7. Use of Psychoactive substances

1.2.7.1 Holder of Licenses or certificates issued in accordance with this part shall not exercise the privileges of their Licenses and related rating when under the influence of any psychoactive substance which might render them unable to safely and properly exercise these privileges.
1.2.7.2 Holders of Licenses or certificates issued in accordance with this part shall not engage in any problematic use of substances.

1.2.7.3 The Licensing authority shall suspend, withdraw or revoke, the Licenses or certificates issued under this part for personnel, who are identified as engaged in any kind of problematic use of substances and the personnel involved shall be charged with violation of Kuwait Civil Aviation Safety Regulation. Holders of Licenses or certificates who are identified as engaged in any kind of problematic use of substance, their return to the safety critical functions shall only be considered after successful treatment, or in cases where no treatment is necessary, after cessation of the problematic use of substance and upon determination that the person’s continued performance of the functions is unlikely to jeopardize safety.

*Note:* Guidance on suitable methods of identification (which may include biochemical testing on such occasions as pre-employment, upon reasonable suspicion, after accidents/incidents, at intervals, and at random) and on other prevention topics is contained in the Manual on Prevention of Problematic Use of Substances in the Aviation Workplace (Doc 9654).

1.2.8 Approved Training Programme and Approved Training Organization

The Operator shall establish and follow an approved training programme by DGCA ASD and the applicant shall undergo closely supervised, systematic and continued courses of training conforming to a planned syllabus or curriculum, to provide a uniform level of competency to all personnel.

1.2.8.1 Approved training shall provide a level of competency at least equal to that provided by the minimum experience requirements for personnel not receiving such approved training.

*Note:* The qualifications required for the issue of personnel Licenses can be more readily and speedily acquired by applicants who undergo closely supervised, systematic and continuous courses of training, conforming to a planned syllabus or curriculum. Provision has accordingly been made for some reduction in the experience requirements for the issue of certain Licenses and ratings prescribed in this Part, in respect of an applicant who has satisfactorily completed a course of approved training.

1.2.8.2 The approval of a training organization by a State shall be dependent upon the applicant demonstrating compliance with the requirements of Appendix 2 of this part.

1.2.8.3 Approved Training Organization

1.2.8.3.1 Approved training for flight crew and air traffic controllers shall be conducted within a DGCA approved training organization.

1.2.8.3.2 The training organization, whether it is a part of the Air Operator or a separate entity that is contracted to train and examine pilots on behalf of the Air Operator, must be approved by the licensing authority as per the DGCA requirements. Alternatively the Licensing authority may render valid an approval for a training organization that is approved by an ICAO contracting State, if the standards upon which the original approval is issued, is acceptable to Kuwait DGCA Licensing authority. (See Appendix 2 of this Part).

1.2.8.3.3 Minimum Requirements for the Selection of Personnel

The DGCA/ASD minimum requirements for the selection of personnel to be qualified as pilots and entitled to obtain DGCA License are established in DGCA Licensing & Certification Requirements and Procedures Manual.
1.2.8.3.4 Student Pilot Requirements

A student pilot shall meet the initial prescribed requirements in terms of age, educational level, and suitability criteria as documented in DGCA Personnel Licensing Procedures Manual.

1.2.8.4 Competency-based approved training for aircraft maintenance personnel shall be conducted within an approved training organization.

*Note:* A comprehensive training scheme for the aircraft maintenance (technician/engineer/mechanic) licence, including the various levels of competency, is contained in the Procedures for Air Navigation Services Training (Doc 9868, PANS-TRG).

1.2.8.5 The training organization, whether it is a part of the Air Operator or a separate entity that is contracted to train and examine pilots on behalf of the Air Operator, must be approved by the licensing authority as per the DGCA requirements. Alternatively the DGCA may render valid an approval for a training organization that is approved by an ICAO contracting State, if the standards upon which the original approval is issued, is acceptable to Kuwait DGCA/ASD Licensing authority. *(See Appendix AA of KCASR’s Part 6)*

1.2.9 Language proficiency

1.2.9.1 Aeroplane and helicopter pilots and those flight navigators who are required to use the radio telephone aboard an aircraft shall demonstrate the ability to speak and understand the language used for radiotelephony communications.

1.2.9.2 Air traffic controllers and aeronautical station operators shall demonstrate the ability to speak and understand the language used for radiotelephony communications.

1.2.9.3 Flight engineers, and glider and free balloon pilots should have the ability to speak and understand the language used for radiotelephony communications.

1.2.9.4 As of 5 March 2008, aeroplane and helicopter pilots, air traffic controllers and aeronautical station operators shall demonstrate the ability to speak and understand the language used for radiotelephony communications to the level specified in the language proficiency requirements in Appendix 1.

1.2.9.5 Aeroplane and helicopter pilots, flight navigators required to use the radio telephone aboard an aircraft, air traffic controllers and aeronautical station operators should demonstrate the ability to speak and understand the language used for radiotelephony communications to the level specified in the language proficiency requirements in Appendix 1.

1.2.9.6 As of 5 March 2008, the language proficiency of aeroplane and helicopter pilots, air traffic controllers and aeronautical station operators who demonstrate proficiency below the Expert Level (Level 6) shall be formally evaluated at intervals in accordance with an individual’s demonstrated proficiency level.

1.2.9.7 The language proficiency of aeroplane and helicopter pilots, flight navigators required to use the radio telephone aboard an aircraft, air traffic controllers and aeronautical station operators who demonstrate proficiency below the Expert Level (Level 6) should be formally evaluated at intervals in accordance with an individual’s demonstrated proficiency level, as follows:

a) those demonstrating language proficiency at the Operational Level (Level 4) should be evaluated at least once every three years; and
b) those demonstrating language proficiency at the Extended Level (Level 5) should be evaluated at least once every six years.

*Note1:* Formal evaluation is not required for applicants who demonstrate expert language proficiency, e.g. native and very proficient non-native speakers with a dialect or accent intelligible to the international aeronautical community.

*Note2:* The provisions of Paragraph 1.2.18 refer to ICAO Annex 10, Volume II, Chapter 5, whereby the language used for radiotelephony communications may be the language normally used by the station on the ground or English. In practice, therefore, there will be situations whereby flight crew members will only need to speak the language normally used by the station on the ground.

### 1.2.10 Duration of Pilot, Flight Engineer License

Any Pilot or Flight Engineer License issued under this part has a **ten years** expiration limit or the date of **attain his 65th birthday** whichever is earlier.

### 1.2.11 Surrender, Suspension or Revocation of License, Certificate or Authority

1) Any flight crew License, Authority or Certificate issued under this part shall cease to be effective if it is surrendered, suspended or revoked;

2) The holder of any License or certificate, issued under this Part that are suspended or revoked shall return such License or certificate to the DGCA within 7 days of notification.

3) Unless the order of revocation provides otherwise, a person whose License/ authority /certificate is revoked, may not apply for any License, certificate or authority before the elapse of one year from the date of revocation.

### 1.2.12 Replacement of Lost or Destroyed License/Certificate/ Authority.

An application for the replacement of a lost or destroyed License or certificate issued under this part shall be made in writing to the DGCA in accordance with the established requirements in the Licensing Procedures and Requirement Manual.

### 1.2.13 Conduct and Reputation

The applicant for a Kuwaiti License or certificate shall furnish evidence of good conduct and reputation.

### 1.2.14 Suspension or Revocation of any License or Certificate.

1) The DGCA shall suspend or revoke any License or certificate where the holder of the License or certificate may harm public interest or jeopardize the national security of the State of Kuwait.

2) The DGCA shall suspend or revoke any License or certificate if the holder of the License or certificate is involved in any illegal act or violated the regulations of the State of Kuwait or any other foreign States while exercising the privileges of his License or certificate.

*Note:* For detailed requirements for the issuance of License or certificates refer to DGCA Personnel Licensing Procedures Manual.

### 1.2.15 Minimum Requirements for the Selection of Personnel

The DGCA minimum requirements for the selection of personnel to be qualified as pilots and entitled to obtain DGCA License are established in DGCA Licensing & Certification Requirements and Procedures Manual.
CHAPTER 2 – LICENSES, RATING, CLASS AND TYPE RATINGS FOR PILOTS

2.1 General rules concerning pilot licences and ratings

2.1.1 General licensing specifications

2.1.1.1 A person shall not act either as a pilot-in-command or as a Co-Pilot of an aircraft, in any of the following categories unless that person is the holder of a pilot License issued in accordance with the provisions of this Chapter:-

- aeroplane
- airship of a volume of more than 4600 cubic meters
- free balloon
- glider
- helicopter
- powered-lift.

2.1.1.2 The category of aircraft shall be included in the title of the License itself, or endorsed as a category rating on the License.

2.1.1.2.1 When the holder of a pilot License seeks a License for an additional category of aircraft, the DGCA shall either:

a) issue the License holder with an additional pilot License for that category of aircraft; or

b) endorse the original License with the new category rating, subject to the conditions of 2.1.2.

Note: The requirements for category ratings are given in terms of licensing specifications for pilots and at levels appropriate to the privileges to be granted to the License holder.

2.1.1.3 An applicant shall, before being issued with any pilot License or rating, meet such requirements in respect of age, knowledge, experience, flight instruction, skill and medical fitness, as are specified for that License or rating.

2.1.1.3.1 An applicant for any pilot License or rating shall demonstrate, in a manner determined by the DGCA, such requirements for knowledge and skill as are specified for that License or rating.

2.1.1.4 Transitional measures related to the powered-lift category

Until 5 March 2015, DGCA may endorse a type rating for aircraft of the powered-lift category on an aeroplane or helicopter pilot licence. The endorsement of the rating on the licence shall indicate that the aircraft is part of the powered-lift category. The training for the type rating in the powered-lift category shall be completed during a course of approved training, shall take into account the previous experience of the applicant in an aeroplane or a helicopter as appropriate and incorporate all relevant aspects of operating an aircraft of the powered-lift category.

2.1.2 Category Ratings

2.1.2.1 The category ratings shall be established for each category of aircraft listed in 2.1.1.1.

2.1.2.2 Category ratings shall not be endorsed on a License when the category is included in the title of the License itself.
2.1.2.3 Any additional category rating endorsed on a pilot License shall indicate the level of licensing privileges at which the category rating is granted.

2.1.2.4 The holder of a pilot License seeking additional category rating shall meet the requirements of this Part appropriate to the privileges for which the category rating is sought.

2.1.3 Class and type rating.

2.1.3.1 Class rating shall be established for aeroplanes certificated for single-pilot operation and shall comprise:
   a) single-engine, land;
   b) single-engine, sea;
   c) multi-engine, land
   d) multi-engine, sea.

   Note: The provisions of this paragraph do not preclude the establishment of other class rating within this basic structure.

2.1.3.1.1 Class rating shall be established for those helicopters certificated for single-pilot operations and which have comparable handling, performance and other characteristics.

2.1.3.2 Type ratings shall be established for:
   a) each type of aircraft certificated for operation with a minimum crew of at least two (2) pilots
   b) each type of helicopter certificated for single-pilot operation except where a class rating has been issued under 2.1.3.1.1; and
   c) any type of aircraft whenever considered necessary by DGCA.

   Note1: Where a common type rating is established, it shall be only for aircraft with similar characteristics in terms of operating procedures, systems and handling.

   Note2: Requirements for class and type ratings for gliders and free balloons have not been determined.

2.1.3.3 When an applicant demonstrates skill and knowledge for the initial issue of a pilot License, the category and the rating appropriate to the class or type of aircraft used in the demonstration shall be entered on the License.

2.1.4 Circumstances in which class and type ratings are required.

2.1.4.1 A holder of a License shall not act as pilot-in-command or as co-pilot of an aeroplane or helicopter unless the holder has received authorization as follows:
   a) the appropriate class rating specified in 2.1.3.1; or
   b) a type rating when required in accordance with the provisions of 2.1.3.2.

2.1.4.1.1 When a type rating is issued limiting the privileges to act as co-pilot, or limiting the privileges to act as pilot only during the cruise phase of the flight, such limitation shall be endorsed on the rating.

2.1.4.2 For the purpose of training, testing, or specific special purpose non-revenue, non-passerenger carrying flights, special authorization may be provided in writing to the License holder by DGCA in place of issuing the class or type rating in accordance with 2.1.4.1. This authorization shall be limited in validity to the time needed to complete the specific flight.
2.1.5 Requirements for the issue of class and type rating.

2.1.5.1 Class rating

The applicant shall have demonstrated a degree of skill appropriate to the License in an aircraft of the class for which the rating is sought.

2.1.5.2 Type Rating as required by 2.1.3.2 a)

The applicant shall have:

a) Gained, under supervision, experience in the applicable type of aircraft and/or Kuwait DGCA approved flight simulator in the following:
   i) Normal flight procedures and maneuvers during all phases of flight;
   ii) Abnormal and emergency procedures and maneuvers in the event of failures and malfunctions of equipment such as power plant, systems and airframe;
   iii) Where applicable, instrument procedures, including instrument approaches, missed approach and landing procedures under normal, abnormal and emergency conditions, including simulated engine failure;
   iv) Procedures for crew incapacitation and crew coordination including allocation of pilot tasks, crew cooperation and use of checklists.

Note: Attention is called to 2.1.8.1 on the qualifications required for pilots giving flight training.

b) Demonstrated the skill and knowledge required for the safe operation of the applicable type of aircraft, relevant to the duties of a pilot-in-command or a co-pilot as applicable; and

c) Demonstrated, at the airline transport pilot License level an extent of knowledge determined by the Licensing authority on the basis of the requirements specified in other applicable parts.

Note: See the Manual of Procedures for Establishment and Management of a State’s Personnel Licensing System (Doc 9379) for guidance of a general nature on cross-crew qualification and cross-credit.

2.1.5.3 Type rating as required by 2.1.3.2 b) and c)

The applicant shall have demonstrated the skill and knowledge required for the safe operation of the applicable type of aircraft, relevant to the Licensing requirements and piloting functions of the applicant.

2.1.6 Use of a flight simulation training device for acquisition of experience and demonstrations of skill

The use of a flight simulation training device for acquiring the experience or performing any maneuvers required during the demonstration of skill for the issue of a License or rating, shall be approved by DGCA which shall ensure that the flight simulation training device used is appropriate to the task.

2.1.7 Circumstances in which an instrument rating is required.

A License holder shall not act either as a pilot-in-command and/or as a co-pilot of an aircraft under instrument flight rules (IFR) unless he has received an authorization comprising an instrument rating appropriate to aircraft category.
Note: The instrument rating is included in the airline transport pilot License – aeroplane, or powered-lift category, multi-crew pilot licence, and commercial pilot licence airship category. The provisions of 2.1.7 do not preclude the issue of a License having the instrument rating as an integral part thereof.

2.1.8 Circumstances in which Authorization to conduct flight instruction

A License holder shall not carry out ground/flight training instruction required for the issue of a pilot licence or rating, unless such holder has received proper authorization from such DGCA. Proper authorization shall comprise:

a) A flight instructor/authorized examiner certificate attached to the License; or

b) The authority to act as an agent of an approved training organization authorized by the DGCA to carry out flight instruction; or

c) A specific authorization granted by the DGCA.

2.1.8.2 A licence holder shall not carry out instruction on a flight simulation training device required for the issue of a pilot licence or rating unless such person holds or has held an appropriate licence or has appropriate flight training and flight experience and has received proper authorization from DGCA.

2.1.9 Crediting of Flight Time

2.1.9.1 A student pilot or the holder of a pilot License shall be entitled to be credited in full with all solo, dual instruction and pilot-in-command flight time towards the total flight time required for the initial issue of a pilot License or the issue of a higher grade of pilot License.

2.1.9.2 The holder of a pilot License, when acting as a co-pilot at a pilot station of an aircraft certificated for operation by a single pilot but required by a DGCA to be operated with a co-pilot, shall be entitled to be credited with not more than 50 per cent of the co-pilot flight time towards the total flight time required for a higher grade of pilot License. DGCA may authorize that flight time be credited in full towards the total flight time required if the aircraft is equipped to be operated by a co-pilot and the aircraft is operated in a multi-crew operation.

2.1.9.3 The holder of a pilot License, when acting as co-pilot at a pilot station of an aircraft certificated to be operated with a co-pilot shall be entitled to be credited in full with this flight time towards the total flight time required for a higher grade of pilot License.

2.1.9.4 The holder of a pilot licence, when acting as pilot-in-command under supervision, shall be entitled to be credited in full with this flight time towards the total flight time required for a higher grade of pilot licence.

2.1.10 Limitation of Privileges of Pilots who have attained their 60th Birthday and Curtailment of Privileges of Pilots who have attained their 65th Birthday.

2.1.10.1 The holder of a pilot license, shall not permit to act as pilot-in-command of an aircraft who are engaged in international commercial air transport operations if the licence holders have attained their 60th birthday or, in the case of operations with more than one pilot where the other pilot is younger than 60 years of age, their 65th birthday.
2.1.10.2 The holder of a pilot license shall not act as co-pilot of an aircraft engaged in international commercial air transport operations if the licence holders have attained their 65th birthday.

Note: Attention is drawn to 1.2.5.2.3 on the validity period of Medical Assessments for pilots over the age of 60 who are engaged in commercial air transport operations.

2.2 Student Pilot

2.2.1 A student pilot shall meet requirements prescribed by the Kuwait DGCA. A student pilot shall not act in any way which constitutes a hazard to air navigation.

2.2.2 A student pilot shall not fly solo unless under the supervision of, or with the authority of, an authorized flight instructor.

2.2.2.1 A student pilot shall not fly solo in an aircraft on an international flights unless by special or general arrangement between the Contracting States concerned.

2.2.3 Medical Fitness

A student pilot shall not fly solo unless that student pilot holds a Class 2 medical assessment.

2.3 Private Pilot License (PPL) - Aeroplane

Requirements for the issue of the License. (currently Kuwait DGCA do not issue private pilot license).

2.3.1 General requirements for the issue of the licence appropriate to the aeroplane, airship, helicopter and powered-lift categories

2.3.1.1 Age – The applicant shall be not less than 17 years of age.

2.3.1.2 Knowledge – The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a private pilot License, and appropriate to the category of aircraft intended to be included in the licence, in at least the following subjects:-

Air Law

a) Rules and regulations relevant to the holder of a private pilot License – aircraft; rules of the air; altimeter setting procedures; appropriate air traffic services practice and procedures;

Aircraft General Knowledge for aeroplanes, airships, helicopters and powered-lifts

b) Principles of operation and functioning of aircraft power-plants, systems and instruments;

c) Operating limitations of relevant category of aircraft and power-plants; relevant operational information from the flight manual or other appropriate document;

d) for helicopters and powered-lifts, transmission (power trains) where applicable;

e) for airships, physical properties and practical application of gases;

Flight performance, planning and loading

f) Effects of loading and mass distribution on flight characteristics; mass and balance calculations;
g) Use of practical application of take-off, landing and other performance data;

h) Pre-flight and en-route flight planning appropriate to private operations under VFR; preparation and filing of air traffic service flight plans; appropriate air traffic service procedures; position reporting procedures; altimeter setting procedures; operation in areas of high density traffic;

**Human Performance**

i) Human performance including principles of threat and error management;

*Note:* Guidance material to design training programmes on human performance, including threat and error management, can be found in the Human Factors Training Manual (Doc 9683).

**Meteorology**

j) Application of elementary aeronautical meteorology; use of, and procedures for obtaining meteorological information; altimetry; hazardous weather conditions;

**Navigation**

k) Practical aspects of air navigation and dead-reckoning techniques; use of aeronautical charts;

**Operational Procedures**

l) Application of threat and error management to operational performance;

*Note:* Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

m) Altimeter setting procedures;

n) Use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;

o) Appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather, wake turbulence and other operating hazards;

p) In the case of helicopters, and if applicable, powered-lifts, settling with power; ground resonance; retreating blade stall; dynamic rollover and other operating hazards; safety procedures, associated with flight in VMC.

**Principles of Flight**

q) Principles of flight relating to aircraft;

**Radiotelephony**

r) Radiotelephony procedures and phraseology as applied to VFR operations, action to be taken in case of communication failure.
2.3.1.3 **Skill.** The applicant shall have demonstrated the ability to perform as pilot-in-command of an aircraft within the appropriate category of aircraft, the procedures and manoeuvres described in 2.3.3.2 or 2.3.4.2.1 or 2.3.5.2 or 2.3.6.2 with a degree of competency appropriate to the privileges granted to the holder of a private pilot licence, and to:-

a) recognize and manage threats and errors;

*Note:* Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

b) operate the aircraft within its limitations;

c) complete all manoeuvres with smoothness and accuracy;

d) exercise good judgment and airmanship;

e) apply aeronautical knowledge; and

f) maintain control of the aircraft at all times in a manner such that the successful outcome of a procedure or maneuver is assured.

2.3.1.4 **Medical fitness.** The applicant shall hold a current Class 2 Medical Assessment.

*Note:* Attention is called to 2.7.1.3 on the medical fitness requirements for private pilot licence holders seeking an instrument rating.

2.3.2 Privileges of the holder of the licence and the conditions to be observed in exercising such privileges

2.3.2.1 Subject to compliance with the requirements specified in 1.2.5, 1.2.6, 1.2.7.1, 1.2.9 and 2.1, the privileges of the holder of a private pilot licence shall be to act, but not for remuneration, as pilot-in-command or co-pilot of aircraft within the appropriate aircraft category engaged in non-revenue flights.

2.3.2.2 Before exercising the privileges at night, the licence holder shall have received dual instruction in aircraft within the appropriate category of aircraft in night flying, including take-off, landing and navigation.

2.3.3 Specific requirements for the issue of the aeroplane category rating

2.3.3.1 Experience

2.3.3.1.1 The applicant shall have completed not less than 40 hours of flight time or 35 hours if completed during a course of approved training, as a pilot of aeroplanes appropriate to the class rating sought. DGCA shall determine whether experience as a pilot under instruction in a flight simulation training device, which it has approved, is acceptable as a part of the total flight time of 40 hours or 35 hours, as the case may be. Credit for such experience shall be limited to a maximum of 5 hours.

2.3.3.1.1.1 When the applicant has flight time as a pilot of aircraft in other categories, DGCA shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of 2.3.3.1.1 can be reduced accordingly.

2.3.3.1.2 The applicant shall have completed in aeroplane not less than 10 hours of solo flight time appropriate to the class rating sought, under the supervision of an authorized flight instructor, including 5 hours of solo cross-country flight time with at least one cross-country flight totaling not less than 270 km. (150 NM) in the course of which full-stop landings at two different aerodromes shall be made.
2.3.3.2 Flight Instruction

The applicant shall have received dual instruction in aeroplanes appropriate to the class rating sought, from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the private pilot:

a) recognize and manage threats and errors;

*Note:* Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

b) Pre-flight operations, including mass and balance determination, aircraft inspection and servicing;

c) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures;

d) Control of the aeroplane by external visual reference;

e) Flight at critically slow airspeeds; recognition of, and recovery from, incipient and full stalls;

f) Flight at critically high airspeeds; recognition of, and recovery from, spiral dives;

g) Normal and cross-wind take-offs and landings;

h) Maximum performance (short field and obstacle clearance) take-offs; short-field landings;

i) Flight by reference solely to instruments, including the completion of a level 180° turn;

j) Cross-country flying using visual reference, dead-reckoning and radio navigation aids; diversion procedures;

k) Emergency operations, including simulated aeroplane equipment malfunctions; and

l) Operations to, from and transiting controlled aerodromes, compliance with air traffic service procedures communication procedures and phraseology.

*Note:* The instrument experience specified in 2.3.3.2.1 i) and the night flying dual instruction in 2.3.2.2 do not entitle the holder of a private pilot License – aeroplane to pilot aeroplanes under IFR.

2.3.4 Specific requirements for the issue of the helicopter category rating

2.3.4.1 Experience

2.3.4.1.1 The applicant shall have completed not less than 40 hours of flight time, or 35 hours if completed during a course of approved training, as a pilot of helicopters. DGCA shall determine whether experience as a pilot under instruction in a flight simulation training device is acceptable as part of the total flight time of 40 hours or 35 hours, as the case may be. Credit for such experience shall be limited to a maximum of 5 hours.
2.3.4.1.1 When the applicant has flight time as a pilot of aircraft in other categories, DGCA shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of 2.3.4.1.1 can be reduced accordingly.

2.3.4.1.2 The applicant shall have completed in helicopters not less than 10 hours of solo flight time under the supervision of an authorized flight instructor, including 5 hours of solo cross-country flight time with at least one cross-country flight totaling not less than 180 km (100 NM) in the course of which landings at two different points shall be made.

2.3.4.2 Flight Instruction

2.3.4.2.1 The applicant shall have received not less than 20 hours of dual instruction time in helicopters from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the private pilot:

a) recognize and manage threats and errors;

Note: Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

b) pre-flight operations, including mass and balance determination, helicopter inspection and servicing;

c) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;

d) control of the helicopter by external visual reference;

e) recovery at the incipient stage from settling with power; recovery techniques from low-rotor rpm within the normal range of engine rpm;

f) ground maneuvering and run-ups; hovering; take-offs and landings — normal, out of wind and sloping ground;

g) take-offs and landings with minimum necessary power; maximum performance take-off and landing techniques; restricted site operations; quick stops;

h) cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids, including a flight of at least one hour;

i) emergency operations, including simulated helicopter equipment malfunctions; autorotative approach;

j) operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures; and communication procedures and phraseology.

2.3.4.2.1.1 The applicant should have received dual instrument flight instruction from an authorized flight instructor. The instructor should ensure that the applicant has operational experience in flight by reference solely to instruments, including the completion of a level 180° turn, in a suitably instrumented helicopter.

Note: The instrument experience specified in 2.3.4.2.1.1 and the night flying dual instruction in 2.3.2.2 do not entitle the holder of a private pilot licence to pilot helicopters under IFR.
2.3.5 Specific requirements for the issue of the powered-lift category rating

2.3.5.1 Experience

2.3.5.1.1 The applicant shall have completed not less than 40 hours of flight time as a pilot of powered-lifts. DGCA should determine whether experience as a pilot under instruction in a flight simulation training device is acceptable as part of the total flight time of 40 hours.

2.3.5.1.2 When the applicant has flight time as a pilot of aircraft in other categories, DGCA shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of 2.3.5.1.1 could be reduced accordingly.

2.3.5.1.3 The applicant shall have completed in powered-lifts not less than 10 hours of solo flight time under the supervision of an authorized flight instructor, including 5 hours of solo cross-country flight time with at least one cross-country flight totaling not less than 270 km (150 NM) in the course of which full-stop landings at two different aerodromes shall be made.

2.3.5.2 Flight instruction

The applicant shall have received not less than 20 hours of dual instruction time in powered-lifts from an authorized flight instructor. The instructor should ensure that the applicant has operational experience in at least the following areas to the level of performance required for the private pilot:

a) recognize and manage threats and errors;

Note: Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

b) pre-flight operations, including mass and balance determination, powered-lift inspection and servicing;

c) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;

d) control of the powered-lift by external visual reference;

e) ground maneuvering and run-ups; hover and rolling take-offs and climb-out; hover and rolling approach and landings — normal, out of wind and sloping ground;

f) take-offs and landings with minimum necessary power; maximum performance take-off and landing techniques; restricted site operations; quick stops;

g) flight by reference solely to instruments, including the completion of a level 180° turn;

h) recovery at the incipient stage from settling with power; recovery techniques from low-rotor rpm within the normal range of engine rpm;

i) cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids, including a flight of at least one hour;

j) emergency operations, including simulated powered-lift equipment malfunctions; power of reconversion to autorotation and autorotative approach, where applicable; transmission and interconnect drive shaft failure, where applicable;
k) operations to from and transiting controlled aerodromes, compliance with air traffic services procedures; and
l) communication procedures and phraseology.

Note: The instrument experience specified in 2.3.5.2 g) and the night flying dual instruction specified in 2.3.2.2 do not entitle the holder of a private pilot licence to pilot powered-lifts under IFR.

2.3.6 Specific requirements for the issue of the airship category rating

2.3.6.1 Experience

The applicant shall have completed not less than 25 hours of flight time as a pilot of airships, including at least:

a) 3 hours of cross-country flight training in an airship with a cross-country flight totaling not less than 45 km (25 NM);
b) 5 take-offs and 5 landings to a full stop at an aerodrome with each landing involving a flight in the traffic pattern at an aerodrome;
c) 3 hours of instrument time; and
d) 5 hours as pilot assuming the duties of the pilot-in-command under the supervision of the pilot-in-command.

2.3.6.2 Flight instruction

The applicant shall have received dual instruction in airships from an authorized flight instructor. The instructor shall ensure that the applicant has received instruction in at least the following areas:

a) recognize and manage threats and errors;
   Note: Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).
b) pre-flight operations, including mass and balance determination, airship inspection and servicing;
c) ground reference manoeuvres;
d) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
e) techniques and procedures for the take-off, including appropriate limitations, emergency procedures and signals used;
f) control of the airship by external visual reference;
g) take-offs, landings and go-arounds;
h) maximum performance (obstacle clearance) take-offs;
i) flight by reference solely to instruments, including the completion of a level 180° turn;
j) navigation, cross-country flying using visual reference, dead reckoning and radio navigation aids;
k) emergency operations (recognition of leaks), including simulated airship equipment malfunctions; and
l) communication procedures and phraseology.

Note: The instrument experience specified in 2.3.6.2 i) and the night flying dual instruction specified in 2.3.2.2 do not entitle the holder of a private pilot licence to pilot airships under IFR.
2.4 Commercial Pilot License (CPL) - Aeroplane

2.4.1 General requirements for the issue of the licence appropriate to the aeroplane, airship, helicopter and powered-lift categories

2.4.1.1 Age – The applicant shall be not less than 18 years of age.

2.4.1.2 Knowledge – The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a Commercial Pilot License and appropriate to the category of aircraft intended to be included in the licence, in at least the following subjects:

**Air Law**

a) Rules and regulations relevant to the holder of a commercial pilot License – aeroplane; rules of the air; appropriate air traffic services practice and procedures;

**Aeroplane General Knowledge.**

b) Principles of operation and functioning of power-plants, systems and instruments;

c) Operating limitations of aeroplane the relevant category of aircraft and power-plants; relevant operational information from the flight manual or other appropriate document;

d) Use and serviceability checks of equipment and systems of appropriate aircraft;

e) Maintenance procedures for airframes, systems and power-plants of appropriate aircraft;

f) for helicopters and powered-lifts, transmission (power trains) where applicable;

g) for airships, physical properties and practical application of gases;

**Flight Performance and Planning and loading**

h) Effects of loading and mass distribution on aeroplane handling, flight characteristics; mass and balance calculations;

i) Use of practical application of take-off, landing and other performance data;

j) Pre-flight and en-route flight planning appropriate to operations under VFR; preparation and filing of air traffic service flight plans; appropriate air traffic service procedures; position reporting procedures; altimeter setting procedures; operation in areas of high density traffic;

**Human Performance**

k) Human performance relevant to the Commercial Pilot – aeroplane.

*Note:* Guidance material to design training programmes on human performance, including threat and error management, can be found in the Human Factors Training Manual (Doc 9683).

**Meteorology**

l) Interpretation and application of aeronautical meteorological reports, charts and forecasts; use of, and procedures for obtaining, meteorological information, pre-flight and in-flight; altimetry;
m) Aeronautical meteorology; climatology of relevant areas in respect of the elements having an effect upon aviation; the movement of pressure systems, the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions; hazardous weather avoidance;

n) causes, recognition and effects of icing; frontal zone penetration procedures; hazardous weather avoidance;

**Navigation**

o) Air navigation, including the use of aeronautical charts, instruments and navigation aids; an understanding of the principles and characteristics of appropriate navigation systems; operation of airborne equipment;

p) in the case of airships:
   i) use, limitation and serviceability of avionics and instruments necessary for control and navigation;
   ii) use, accuracy and reliability of navigation systems used in departure, en-route, approach and landing phases of flight, identification of radio navigation aids;
   iii) principles and characteristics of self-contained and external referenced navigation systems, operation of airborne equipment;

**Operational Procedures**

q) application of threat and error management to operational performance;

**Note:** Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

r) Use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;

s) altimeter setting procedures;

t) Appropriate precautionary and emergency procedures;

u) Operational procedures for carriage of freight; potential hazards associated with dangerous goods;

v) Requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from aircraft;

w) in the case of helicopters, and if applicable, powered-lifts, settling with power; ground resonance; retreating blade stall; dynamic rollover and other operating hazards; safety procedures, associated with flight in VMC;

**Principles of Flight**

x) Principles of flight relating to aeroplane;

**Radiotelephony**

y) Communication procedures and phraseology as applied to VFR operations; action to be taken in case of communication failure.
2.4.1.3 Skill

The applicant shall have demonstrated the ability to perform as pilot-in-command of an aircraft within the appropriate category of aircraft, the procedures and manoeuvres described in 2.4.3.2 or 2.4.4.2 or 2.4.5.2 or 2.4.6.2 with a degree of competency appropriate to the privileges granted to the holder of a commercial pilot licence, and to:-

a) recognize and manage threats and errors;

   Note: Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

b) operate the aircraft within its limitations;

c) complete all manoeuvres with smoothness and accuracy;

d) exercise good judgment and airmanship;

e) apply aeronautical knowledge; and

f) maintain control of the aircraft at all times in a manner such that the successful outcome of a procedure or maneuver is assured.

2.4.1.4 Medical fitness

The applicant shall hold a current Class 1 Medical Assessment.

2.4.2 Privileges of the holder of the licence and the conditions to be observed in exercising such privileges

2.4.2.1 Subject to compliance with the requirements specified in 1.2.5, 1.2.6, 1.2.7.1, 1.2.9 and 2.1, the privileges of the holder of a Commercial Pilot License shall be: -

a) To exercise all the privileges of the holder of a private pilot license in an aircraft within the appropriate aircraft category;

b) To act as pilot-in-command of an aircraft within the appropriate aircraft category engaged in operation other than commercial air transportation;

c) To act as pilot in command in commercial air transportation of an aircraft within the appropriate aircraft and certified for single-pilot operation; and

d) To act as co-pilot of an aircraft within the appropriate aircraft category required to be operated with a co-pilot; and

e) for the airship category, to pilot an airship under IFR.

2.4.2.2 Before exercising the privileges at night, the licence holder shall have received dual instruction in aircraft within the appropriate category of aircraft in night flying, including take-off, landing and navigation.

   Note: Certain privileges of the licence are curtailed by 2.1.10 for licence holders when they attain their 60th and 65th birthdays.

2.4.3 Specific requirements for the issue of the aeroplane category rating

2.4.3.1 Experience

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2.4.3.1.1 The applicant shall have completed not less than 200 hours of flight time, or 150 hours if completed during a course of approved training, as a pilot of aeroplane. The Licensing authority shall determine whether experience as a pilot under instruction in a flight simulation training device, which it has approved, is acceptable as part of the total flight time of 200 hours or 150 hours, as the case may be. Credit for such experience shall be limited to a maximum of 10 hours.

2.4.3.1.1.1 The applicant shall have completed in aeroplane not less than:

a. 100 hours as pilot-in-command or, in the case of a course of approved training, 70 hours as pilot-in-command;

b. 20 hours of cross-country flight time as pilot-in-command including a cross-country flight totaling not less than 540 km (300 NM) in the course of which full stop landings at two different aerodromes shall be made;

c. 10 hours of instrument instruction time of which not more than 5 hours may be instrument ground time; and

d. if the privileges of the License are to be exercised at night, 5 hours of night flight time including 5 take-offs and 5 landings as pilot in command.

2.4.3.2 Flight Instruction

The applicant shall have received dual instruction in aeroplane appropriate to the class and/or type rating, sought from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot:

a) recognize and manage threats and errors;

Note: Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

b) Pre-flight operations, including mass and balance determination, aeroplane inspection and servicing;

c) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures;

d) Control of the aeroplane by external visual reference;

e) Flight at critically slow airspeeds; spin avoidance; recognition of, and recovery from, incipient and full stalls;

f) Flight with asymmetrical power for multi-engine class or type ratings;

g) Flight at critically high airspeeds; recognition of, and recovery from, spiral dives;

h) Normal and cross-wind take-offs and landings;
i) Maximum performance (short field and obstacle clearance) take-offs; short-field landings;

j) Basic flight maneuvers and recovery from unusual attitudes by reference solely to basic flight instruments;

k) Cross-country flying using visual reference, dead-reckoning and radio navigation aids; diversion procedures;

l) Abnormal and Emergency procedures and maneuvers including simulated aeroplane equipment malfunction; and;

m) Operations to, from and transiting controlled aerodromes, compliance with air traffic service procedures, radiotelephony procedures and phraseology.

Note: The instrument experience specified in 2.4.3.1.1.1 c) and 2.4.3.2 j) and the night flying experience and dual instruction specified in 2.4.3.1.1 d) and 2.4.2.2 do not entitle the holder of a commercial pilot licence to pilot aeroplanes under IFR.

2.4.4 Specific requirements for the issue of the helicopter category rating

2.4.4.1 Experience

2.4.4.1.1 The applicant shall have completed not less than 150 hours of flight time, or 100 hours if completed during a course of approved training, as a pilot of helicopters. DGCA shall determine whether experience as a pilot under instruction in a flight simulation training device is acceptable as part of the total flight time of 150 hours or 100 hours, as the case may be. Credit for such experience shall be limited to a maximum of 10 hours.

2.4.4.1.1.1 The applicant shall have completed in helicopters not less than:

a. 35 hours as pilot-in-command;

b. 10 hours of cross-country flight time as pilot-in-command including a cross-country flight in the course of which landings at two different points shall be made;

c. 10 hours of instrument instruction time of which not more than 5 hours may be instrument ground time; and

d. if the privileges of the licence are to be exercised at night, 5 hours of night flight time including 5 take-offs and 5 landing patterns as pilot-in-command.

2.4.4.1.2 When the applicant has flight time as a pilot of aircraft in other categories, DGCA shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of 2.4.4.1.1 can be reduced accordingly.

2.4.4.2 Flight instruction

The applicant shall have received dual instruction in helicopters from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot:

a) recognize and manage threats and errors;

Note: Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).
b) pre-flight operations, including mass and balance determination, helicopter inspection and servicing;

c) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;

d) control of the helicopter by external visual reference;

e) recovery at the incipient stage from settling with power; recovery techniques from low-rotor rpm within the normal range of engine rpm;

f) ground maneuvering and run-ups; hovering; take-offs and landings — normal, out of wind and sloping ground; steep approaches;

g) take-offs and landings with minimum necessary power; maximum performance take-off and landing techniques; restricted site operations; quick stops;

h) hovering out of ground effect; operations with external load, if applicable; flight at high altitude;

i) basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;

j) cross-country flying using visual reference, dead reckoning and radio navigation aids; diversion procedures;

k) abnormal and emergency procedures, including simulated helicopter equipment malfunctions, autorotative approach and landing; and

l) operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures; and

m) communication procedures and phraseology.

Note: The instrument experience specified in 2.4.4.1.1.1 c) and 2.4.4.2 i) and the night flying experience and dual instruction specified in 2.4.4.1.1 d) and 2.4.2.2 do not entitle the holder of a commercial pilot licence to pilot helicopters under IFR.

2.4.5 Specific requirements for the issue of the powered-lift category rating

2.4.5.1 Experience

2.4.5.1.1 The applicant shall have completed not less than 200 hours of flight time in a powered-lift, or 150 hours if completed during a course of approved training, as a pilot of aircraft. DGCA should determine whether experience as a pilot under instruction in a flight simulation training device is acceptable as part of the total flight time of 200 hours or 150 hours, as the case may be.

2.4.5.1.2 The applicant shall have completed in a powered-lift not less than:

a. 50 hours as pilot-in-command;

b. 10 hours of cross-country flying as pilot-in-command including a cross-country flight totaling not less than 540 km (300 NM) in the course of which full-stop landings at two different aerodromes should be made;

c. 10 hours of instrument instruction of which not more than 5 hours may be instrument ground time; and

d. if the privileges of the licence are to be exercised at night, 5 hours of night flight time including 5 take-offs and landings as pilot-in-command.
2.4.5.1.3 When the applicant has flight time as a pilot of aircraft in other categories, DGCA shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of 2.4.5.1.1 could be reduced accordingly.

2.4.5.2 Flight instruction

The applicant shall have received dual instruction time in a powered-lift from an authorized flight instructor. The instructor should ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot:

a) recognize and manage threats and errors;

Note: Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

b) pre-flight operations, including mass and balance determination, powered-lift inspection and servicing;

c) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;

d) control of the powered-lift by external visual reference;

e) recovery at the incipient stage from settling with power; recovery techniques from low-rotor rpm within the normal range of engine rpm;

f) ground maneuvering and run-ups; hover and rolling take-offs and climb-out; hover and rolling approach and landings — normal, out of wind and sloping ground; steep approaches;

g) take-offs and landings with minimum necessary power; maximum performance take-off and landing techniques; restricted site operations; quick stops;

h) hovering out of ground effect; operations with external load, if applicable; flight at high altitude;

i) basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;

j) cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids, including a flight of at least one hour;

k) emergency operations, including simulated powered-lift equipment malfunctions; power of reconversion to autorotation and autorotative approach, where applicable; transmission and interconnect driveshaft failure, where applicable;

l) operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures; and

m) communication procedures and phraseology.

Note: The instrument experience specified in 2.4.5.1.2 c) and 2.4.5.2 i) and the night flying experience and dual instruction specified in 2.4.5.1.2 d) and 2.4.2.2 do not entitle the holder of a commercial pilot licence to pilot powered-lifts under IFR.
2.4.6 Specific requirements for the issue of the airship category rating

2.4.6.1 Experience

2.4.6.1.1 The applicant shall have completed not less than 200 hours of flight time as a pilot.

The applicant shall have completed not less than:

a) 50 hours as a pilot of airships;

b) 30 hours in airships as pilot-in-command or pilot-in-command under supervision, to include not less than:
   — 10 hours of cross-country flight time; and
   — 10 hours of night flight;

c) 40 hours of instrument time, of which 20 hours shall be in flight and 10 hours in flight in airships; and

d) 20 hours of flight training in airships in the areas of operation listed in 2.4.6.2.

2.4.6.2 Flight instruction

The applicant shall have received dual instruction in airships from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot:

- recognize and manage threats and errors;
  
  **Note:** Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

- pre-flight operations, including mass and balance determination, airship inspection and servicing;

- aerodrome and traffic pattern operations, collision avoidance precautions and procedures;

- techniques and procedures for the take-off, including appropriate limitations, emergency procedures and signals used;

- control of the airship by external visual reference;

- recognition of leaks;

- normal take-offs and landings;

- maximum performance (short field and obstacle clearance) take-offs; short-field landings;

- flight under IFR;

- cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids;

- emergency operations, including simulated airship equipment malfunctions;

- operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures; and

- communication procedures and phraseology.
2.5 Multi-crew pilot licence appropriate to the aeroplane category

2.5.1 General requirements for the issue of the licence

2.5.1.1 Age. The applicant shall be not less than 18 years of age.

2.5.1.2 Knowledge. The applicant shall have met the requirements specified in 2.6.1.2 for the airline transport pilot licence appropriate to the aeroplane category in an approved training course.

2.5.1.3 Skill

2.5.1.3.1 The applicant shall have demonstrated the skills required for fulfilling all the competency units specified in Appendix 3 as pilot flying and pilot not flying, to the level required to perform as a co-pilot of turbine-powered aeroplanes certificated for operation with a minimum crew of at least two pilots under VFR and IFR, and to:

a) recognize and manage threats and errors;

Note: Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

b) smoothly and accurately, manually control the aeroplane within its limitations at all times, such that the successful outcome of a procedure or maneuver is assured;

c) operate the aeroplane in the mode of automation appropriate to the phase of flight and to maintain awareness of the active mode of automation;

d) perform, in an accurate manner, normal, abnormal and emergency procedures in all phases of flight; and

e) communicate effectively with other flight crew members and demonstrate the ability to effectively perform procedures for crew incapacitation, crew coordination, including allocation of pilot tasks, crew cooperation, adherence to standard operating procedures (SOPs) and use of checklists.

2.5.1.3.2 Progress in acquiring the skills specified in 2.5.1.3.1 shall be continuously assessed.

2.5.1.4 Medical fitness

The applicant shall hold a current Class 1 medical assessment.

2.5.2 Privileges of the holder of the licence and the conditions to be observed in exercising such privileges

2.5.2.1 Subject to compliance with the requirements specified in 1.2.5, 1.2.6, 1.2.7.1, 1.2.9 and 2.1, the privileges of the holder of a multi-crew pilot licence shall be:-

a) to exercise all the privileges of the holder of a private pilot licence in the aeroplane category provided the requirements of paragraph 2.3.3 have been met;

b) to exercise the privileges of the instrument rating in a multi-crew operation; and
c) to act as co-pilot of an aeroplane required to be operated with a co-pilot.

2.5.2.2 Before exercising the privileges of the instrument rating in a single-pilot operation in aeroplanes, the licence holder shall have demonstrated an ability to act as pilot-in-command in a single-pilot operation exercised by reference solely to instruments and shall have met the skill requirement specified in 2.7.1.2 appropriate to the aeroplane category.

2.5.2.3 Before exercising the privileges of a commercial pilot licence in a single-pilot operation in aeroplanes, the licence holder shall have:

a) completed in aeroplanes 70 hours, either as pilot-in-command, or made up of not less than 10 hours as pilot-in-command and the necessary additional flight time as pilot-in-command under supervision;

b) completed 20 hours of cross-country flight time as pilot-in-command, or made up of not less than 10 hours as pilot-in-command and 10 hours as pilot-in-command under supervision, including a cross-country flight totaling not less than 540 km (300 NM) in the course of which full-stop landings at two different aerodromes shall be made; and

c) met the requirements for the commercial pilot licence specified in 2.4.1.2, 2.4.1.3, 2.4.3.1.1 (with the exception of 2.4.3.1.1.1 a)) and 2.4.3.2 appropriate to the aeroplane category.

Note1: When a Contracting State grants single-pilot operation privileges to the holder of a multi-crew pilot licence, it can document the privileges through an endorsement of the multi-crew pilot licence or through the issuance of a commercial pilot licence in the aeroplane category.

Note2: Certain privileges of the licence are curtailed by 2.1.10 for licence holders when they attain their 65th birthday.

2.5.3 Experience

2.5.3.1 The applicant shall have completed in an approved training course not less than 240 hours as pilot flying and pilot not flying of actual and simulated flight.

2.5.3.2 Flight experience in actual flight shall include at least the experience requirements at 2.3.3.1, upset recovery training, night flying and flight by reference solely to instruments.

2.5.3.3 In addition to meeting the provisions of 2.5.3.2, the applicant shall have gained, in a turbine-powered aeroplane certificated for operation with a minimum crew of at least two pilots, or in a flight simulation training device approved for that purpose by DGCA in accordance with Appendix 3, paragraph 4, the experience necessary to achieve the advanced level of competency defined in Appendix 3.

2.5.4 Flight instruction

2.5.4.1 The applicant shall have completed a course of approved training covering the experience requirements specified in 2.5.3.

2.5.4.2 The applicant shall have received dual flight instruction in all the competency units specified in Appendix 3, to the level required for the issue of the multi-crew pilot licence, to include the competency units required to pilot under instrument flight rules.
2.6 Airline Transport Pilot License (ATPL) - Aeroplane

2.6.1 General requirements for the issue of the licence appropriate to the aeroplane, helicopter and powered-lift categories

2.6.1.1 Age – The applicant shall be not less than 21 years of age.

2.6.1.2 Knowledge – The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of an Airline Transport Pilot License and appropriate to the category of aircraft intended to be included in the license, in at least the following subjects:

**Air Law**

a) Rules and regulations relevant to the holder of an Airline Transport Pilot License; rules of the air; appropriate air traffic services practice and procedures; Aircraft General Knowledge for aeroplanes, helicopters and powered-lifts;

b) General characteristics and limitations of electrical, hydraulic, pressurization and other aeroplane systems; flight control systems, including autopilot and stability augmentation;

c) Principles of operation, handling procedures and operating limitations of aircraft power plants; effects of atmospheric conditions on engine performance; relevant operational information from the flight manual or other appropriate document;

d) Operating procedures and limitations of appropriate aeroplane; effects of atmospheric conditions on aeroplane performance in accordance with the relevant operational information from the flight manual;

e) Use and serviceability checks of equipment and systems of appropriate aircraft;

f) Flight instruments; compasses; turning and acceleration errors; gyroscopic instruments, operational limits and precession effects; practices and procedures in the event of malfunctions of various flight instruments and electronic display units;

g) Maintenance procedures for airframes, systems and power plants of appropriate aircraft;

h) for helicopters and powered-lifts, transmission (power trains) where applicable;

**Flight Performance and Planning and loading**

i) Effects of loading and mass distribution on aeroplane handling, flight characteristics and performance; mass and balance calculations;

j) Use of practical application of take-off, landing and other performance data, including procedures for cruise control;

k) Pre-flight and en-route flight planning; preparation and filing of air traffic service flight plans; appropriate air traffic service procedures; altimeter setting procedures;

l) in the case of helicopters and powered-lifts, effects of external loading on handling;
**Human Performance**

m) Human performance relevant to the Airline Transport Pilot – aeroplane.

*Note:* Guidance material to design training programmes on human performance, including threat and error management, can be found in the Human Factors Training Manual (Doc 9683).

**Meteorology**

n) Interpretation and application of aeronautical meteorological reports, charts and forecasts; codes and abbreviations; use of, and procedures for obtaining, meteorological information; pre-flight and in-flight altimetry;

o) Aeronautical meteorology; climatology of relevant areas in respect of the elements having an effect upon aviation; the movement of pressure systems, the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions; hazardous weather avoidance;

p) Causes, recognition and effects of engine and airframe icing; frontal zone penetration procedures; hazardous weather avoidance;

q) In the case of aeroplanes and powered-lifts Practical high altitude meteorology, including interpretation and use of weather reports, charts and forecasts, jet streams;

**Navigation**

r) Air navigation, including the use of aeronautical charts, radio navigation aids and area navigation systems; specific navigation requirements for long-range flights;

s) Use, limitation and serviceability of avionics and instruments necessary for the control and navigation of aeroplane;

**Operational Procedures**

v) application of threat and error management to operational performance;

*Note:* Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

w) Interpretation and use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations, and instrument procedure charts for departure, en-route, descent and approach;

x) Precautionary and emergency procedures; safety practices associated with flight under IFR;

y) Operational procedures for carriage of freight and dangerous goods;
z) Requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from aircraft;

aa) in the case of helicopters, and if applicable, powered-lifts, settling with power; ground resonance; retreating blade stall; dynamic rollover and other operating hazards; safety procedures, associated with flight in VMC;

**Principles of Flight**

bb) Principles of flight;

**Radiotelephony**

cc) Communication procedures and phraseology; action to be taken in case of communication failure.

**2.6.1.2.1** In addition to the above subjects, the applicant for an airline transport pilot license applicable to the aeroplane or powered-lift category shall have met the knowledge requirements for the instrument rating at 2.7.1.1.

**2.6.1.3 Skill**

**2.6.1.3.1** The applicant shall have demonstrated the ability to perform, as pilot-in-command of an aircraft within the appropriate category required to be operated with a copilot, the following procedures and manoeuvres:-

a) pre-flight procedures, including the preparation of the operational flight plan and filing of the air traffic services flight plan;

b) normal flight procedures and manoeuvres during all phases of flight;

c) abnormal and emergency procedures and manoeuvres related to failures and malfunctions of equipment, such as power-plant, systems and airframe;

d) procedures for crew incapacitation and crew coordination, including allocation of pilot tasks, crew cooperation and use of checklists; and

e) in the case of aeroplanes and powered-lifts, procedures and manoeuvres for instrument flight described in 2.7.4.1 a) to d), including simulated engine failure.

**2.6.1.3.1.1** In the case of an aeroplane, the applicant shall have demonstrated the ability to perform the procedures and manoeuvres described in 2.6.1.3.1 as pilot-in-command of a multi-engined aeroplane.

**2.6.1.3.1.2** The applicant shall have demonstrated the ability to perform the procedures and manoeuvres described in 2.6.1.3 with a degree of competency appropriate to the privileges granted to the holder of an airline transport pilot licence, and to:-

a) recognize and manage threats and errors;

*Note:* Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

b) smoothly and accurately, manually control the aircraft within its limitations at all times, such that the successful outcome of a procedure or maneuver is assured;
c) operate the aircraft in the mode of automation appropriate to the phase of flight and to maintain awareness of the active mode of automation;

d) perform, in an accurate manner, normal, abnormal and emergency procedures in all phases of flight;

e) exercise good judgment and airmanship, to include structured decision making and the maintenance of situational awareness; and

f) communicate effectively with other flight crew members and demonstrate the ability to effectively perform procedures for crew incapacitation, crew coordination, including allocation of pilot tasks, crew cooperation, adherence to standard operating procedures (SOPs) and use of checklists.

2.6.1.4 **Medical fitness**

The applicant shall hold a current Class 1 Medical Assessment.

2.6.2 **Privileges of the holder of the licence and the conditions to be observed in exercising such privileges**

2.6.2.1 Subject to compliance with the requirements specified in 1.2.5, 1.2.6, 1.2.7.1, 1.2.9 and 2.1, the privileges of the holder of an airline transport pilot licence shall be:

a) to exercise all the privileges of the holder of a private and commercial pilot licence in an aircraft within the appropriate aircraft category and, in the case of a licence for the aeroplane and powered-lift categories, of the instrument rating; and

b) to act as pilot-in-command, in commercial air transportation, of an aircraft within the appropriate category and certificated for operation with more than one pilot.

2.6.2.2 When the holder of an airline transport pilot license in the aeroplane category has previously held only a multi-crew pilot license, the privileges of the license shall be limited to multi-crew operations unless the holder has met the requirements established in 2.5.2.1 a), 2.5.2.2 and 2.5.2.3 as appropriate. Any limitation of privileges shall be endorsed on the license.

**Note:** Certain privileges of the license are curtailed by 2.1.10 for license holders when they attain their 60th and 65th birthdays.

2.6.3 **Specific requirements for the issue of the aeroplane category rating**

2.6.3.1 **Experience**

The applicant shall have completed not less than 1500 hours of flight time as a pilot of an aeroplanes. Experience as a pilot under instruction in a flight simulation training device is acceptable as part of the total flight time of 1500 hours. Credit for such experience shall be limited to a maximum of 100 hours, of which not more than 25 hours shall have been acquired in a flight procedure trainer or a basic instrument flight trainer.

2.6.3.1.1 The applicant shall have completed in an aeroplane not less than:

a) 500 hours as pilot-in-command under supervision or 250 hours, either as pilot-in-command, or made up by not less than 70 hours as pilot-in-command and the necessary additional flight time as co-pilot performing, under the supervision of the pilot-in-command, the duties and functions of a pilot-in-command, provided that the method of supervision employed is acceptable to the DGCA;
b) 200 hours of cross-country flight time, of which not less than 100 hours shall be as pilot-in-command or as co-pilot performing, under the supervision of the pilot-in-command, the duties and functions of a pilot-in-command, provided that the method of supervision employed is acceptable to the DGCA;

c) 75 hours of instrument time, of which not more than 30 hours may be instrument ground time; and

d) 100 hours of night flight as pilot-in-command or as co-pilot.

2.6.3.1.2 When the applicant has flight time as a pilot of aircraft in other categories, DGCA shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of 2.6.3.1.1 can be reduced accordingly.

2.6.3.2 Flight instruction

The applicant shall have received the dual flight instruction required at 2.4.3.2 for the issue of the commercial pilot license and at 2.7.4 for the issue of the instrument rating or at 2.5.4 for the issue of the multi-crew pilot license.

2.6.4 Specific requirements for the issue of the helicopter category rating

2.6.4.1 Experience

2.6.4.1.1 The applicant shall have completed not less than 1000 hours of flight time as a pilot of helicopters. DGCA shall determine whether experience as a pilot under instruction in a flight simulation training device is acceptable as part of the total flight time of 1000 hours. Credit for such experience shall be limited to a maximum of 100 hours, of which not more than 25 hours shall have been acquired in a flight procedure trainer or a basic instrument flight trainer.

2.6.4.1.1.1 The applicant shall have completed in helicopters not less than:

a) 250 hours, either as pilot-in-command, or made up of not less than 70 hours as pilot-in-command and the necessary additional flight time as pilot-in-command under supervision;

b) 200 hours of cross-country flight time, of which not less than 100 hours shall be as pilot-in-command or as pilot-in-command under supervision;

c) 30 hours of instrument time, of which not more than 10 hours may be instrument ground time; and

d) 50 hours of night flight as pilot-in-command or as co-pilot.

2.6.4.1.2 When the applicant has flight time as a pilot of aircraft in other categories, DGCA shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of 2.6.4.1.1 can be reduced accordingly.

2.6.4.2 Flight instruction

The applicant shall have received the flight instruction required for the issue of the commercial pilot licence (2.4.4.2).

Note: The instrument time specified in 2.6.4.1.1.1 c) and the night flying time specified in 2.6.4.1.1.1 d) do not entitle the holder of the airline transport pilot licence — helicopter to pilot helicopters under IFR.
2.6.5 Specific requirements for the issue of the powered-lift category rating

2.6.5.1 Experience

2.6.5.1.1 The applicant shall have completed not less than 1500 hours of flight time as a pilot of powered-lifts. DGCA should determine whether experience as a pilot under instruction in a flight simulation training device is acceptable as part of the total flight time of 1500 hours.

2.6.5.1.2 The applicant shall have completed in powered-lifts not less than:

   a) 250 hours, either as pilot-in-command, or made up of not less than 70 hours as pilot-in-command and the necessary additional flight time as pilot-in-command under supervision;
   b) 100 hours of cross-country flight time, of which not less than 50 hours should be as pilot-in-command or as pilot-in-command under supervision;
   c) 75 hours of instrument time, of which not more than 30 hours may be instrument ground time; and
   d) 25 hours of night flight as pilot-in-command or as co-pilot.

2.6.5.1.3 When the applicant has flight time as a pilot of aircraft in other categories, DGCA should determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of 2.6.5.1.1 could be reduced accordingly.

2.6.5.2 Flight instruction

   The applicant shall have received the dual flight instruction required at 2.4.5.2 for the issue of the commercial pilot licence and at 2.7.4 for the issue of the instrument rating.

2.7 Instrument rating

2.7.1 Requirements for the issue of the rating for aeroplane, airship, helicopter and powered-lift categories

2.7.1.1 Knowledge

   The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of an instrument rating, in at least the following subjects:

   **Air law**

   a) rules and regulations relevant to flight under IFR; related air traffic services practices and procedures;

   **Aircraft general knowledge for the aircraft category being sought**

   b) use, limitation and serviceability of avionics, electronic devices and instruments necessary for the control and navigation of aircraft under IFR and in instrument meteorological conditions; use and limitations of autopilot;

   c) compasses, turning and acceleration errors; gyroscopic instruments, operational limits and precession effects; practices and procedures in the event of malfunctions of various flight instruments;
Flight performance and planning for the aircraft category being sought

d) pre-flight preparations and checks appropriate to flight under IFR;
e) operational flight planning; preparation and filing of air traffic services flight plans under IFR; altimeter setting procedures;

Human performance for the aircraft category being sought

f) human performance relevant to instrument flight in aircraft including principles of threat and error management;

Note: Guidance material to design training programmes on human performance, including threat and error management, can be found in the Human Factors Training Manual (Doc 9683).

Meteorology for the aircraft category being sought

g) application of aeronautical meteorology; interpretation and use of reports, charts and forecasts; codes and abbreviations; use of, and procedures for obtaining, meteorological information; altimetry;
h) causes, recognition and effects of icing; frontal zone penetration procedures; hazardous weather avoidance;
i) in the case of helicopters and powered-lifts, effects of rotor icing;

Navigation for the aircraft category being sought

j) practical air navigation using radio navigation aids;
k) use, accuracy and reliability of navigation systems used in departure, en-route, approach and landing phases of flight; identification of radio navigation aids;

Operational procedures for the aircraft category being sought

l) application of threat and error management to operational performance;
m) interpretation and use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations, and instrument procedure charts for departure, en-route, descent and approach;
n) precautionary and emergency procedures; safety practices associated with flight under IFR; obstacle clearance criteria;

Note: Information for pilots and flight operations personnel on flight procedure parameters and operational procedures is contained in the Procedures for Air Navigation Services (PANS-OPS, Doc 8168), Volume I — Flight Procedures. Procedures used in certain States may differ from PANS-OPS, and knowledge of these differences is important for safety reasons.

Radiotelephony

o) communication procedures and phraseology as applied to aircraft operations under IFR; action to be taken in case of communication failure.

2.7.1.2 Skill

2.7.1.2.1 The applicant shall have demonstrated in an aircraft of the category for which the instrument rating is being sought the ability to perform the procedures and manoeuvres described in 2.7.4.1 with a degree of competency appropriate to the privileges granted to the holder of an instrument rating, and to:

a) recognize and manage threats and errors;
b) Operate the aircraft for the category being sought, within its limitations;

c) Complete all maneuvers with smoothness and accuracy;
d) Exercise good judgment and airmanship;
e) Apply aeronautical knowledge;
f) Maintain control of the aircraft at all times in a manner such that the successful outcome of a procedure or maneuver is assured;

2.7.1.2.1.1 The applicant shall have demonstrated the ability to operate multi-engined aircraft within the appropriate category by reference solely to instruments with one engine inoperative, or simulated inoperative, if the privileges of the instrument rating are to be exercised on such aircraft.

Note: Attention is called to 2.1.6 on the use of flight simulation training devices for demonstrations of skill.

2.7.1.3 Medical fitness

2.7.1.3.1 Applicants who hold a private pilot licence shall have established their hearing acuity on the basis of compliance with the hearing requirements for the issue of a Class 1 Medical Assessment.

2.7.1.3.2 Kuwait DGCA require the holder of a private pilot License to comply with the physical, mental, and visual requirements for the issue of a class 1 medical assessment.

2.7.2 Privileges of the holder of the License and the conditions to be observed in exercising such privileges.

2.7.2.1 Subject to compliance with the requirements specified in 1.2.5, 1.2.6 and 2.1, the privileges of the holder of an instrument rating with a specific aircraft category shall be to pilot that category of aircraft under IFR.

2.7.2.2 Before exercising the privileges on multi-engined aircraft, the holder of the rating shall have complied with the requirements of 2.7.1.2.1.1.

Note: Pilots may exercise joint category privileges of the instrument rating on more than one category of aircraft if they have completed the requirements in each category.

2.7.3 Experience

2.7.3.1 The applicant shall hold pilot licence for the aircraft category being sought.

2.7.3.2 The applicant shall have completed not less than:

a) 50 hours of cross-country flight time as pilot-in-command of aircraft in categories acceptable to DGCA, of which not less than 10 hours shall be in the aircraft category being sought; and

b) 40 hours of instrument time in aircraft, of which not more than 20 hours, or 30 hours where a flight simulator is used, may be instrument ground time. The ground time shall be under the supervision of an authorized instructor.
2.7.4 Flight Instruction

The applicant shall have gained not less than 10 hours of the instrument flight time required in 2.7.3.2 b) while receiving dual instrument flight instructions in the aircraft category being sought, from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the holder of an instrument rating:

a) Pre-flight procedures, including the use of the flight manual or equivalent document, and appropriate air traffic service documents in the preparation of an IFR flight plan;

b) Pre-flight inspection, use of checklists, taxiing and pre-take-off checks;

c) Procedures and maneuvers for IFR operation under normal, abnormal and emergency conditions covering at least:
   • Transition to instrument flight on take-off
   • Standard instrument departures and arrivals
   • En-route IFR procedures and navigation
   • Holding procedures
   • Instrument approaches to specified minima
   • Missed approach procedures
   • Landings from instrument approaches

d) In-flight maneuvers and particular flight characteristics.

2.7.4.1 If the privileges of the instrument rating are to be exercised on multi-engine aircraft, the applicant shall have received dual instrument flight instruction in a multi-engined aircraft within the appropriate category from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in the operation of the aircraft within the appropriate category by reference solely to instruments with one engine inoperative or simulated inoperative.

2.8 Flight instructor rating appropriate to aeroplanes, airships, helicopters and powered-lifts

2.8.1 Requirements for the issue of the rating

2.8.1.1 Knowledge

The applicant shall have met the knowledge requirements for the issue of a commercial pilot licence as appropriate to the category of aircraft included in the licence. In addition, the applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a flight instructor rating, in at least the following areas:

a) techniques of applied instruction;

b) assessment of student performance in those subjects in which ground instruction is given;

c) the learning process;

d) elements of effective teaching;

e) student evaluation and testing, training philosophies;
f) training programme development;
g) lesson planning;
h) classroom instructional techniques;
i) use of training aids, including flight simulation training devices as appropriate;
j) analysis and correction of student errors;
k) human performance relevant to flight instruction including principles of threat and error management;

Note: Guidance material to design training programmes on human performance, including threat and error management, can be found in the Human Factors Training Manual (Doc 9683).
l) hazards involved in simulating system failures and malfunctions in the aircraft.

2.8.1.2 Skill

The applicant shall have demonstrated, in the category and class of aircraft for which flight instructor privileges are sought, the ability to instruct in those areas in which flight instruction is to be given, including pre-flight, post-flight and ground instruction as appropriate.

2.8.1.3 Experience

The applicant shall have met the experience requirements for the issue of a commercial pilot licence as specified in 2.4.3.1, 2.4.4.1, 2.4.5.1 and 2.4.6.1 for each aircraft category, as appropriate.

2.8.1.4 Flight instruction

The applicant shall, under the supervision of a flight instructor accepted by DGCA for that purpose:-

a) have received instruction in flight instructional techniques including demonstration, student practices, recognition and correction of common student errors; and

b) have practiced instructional techniques in those flight manoeuvres and procedures in which it is intended to provide flight instruction.

2.8.2 Privileges of the holder of the rating and the conditions to be observed in exercising such privileges

2.8.2.1 Subject to compliance with the requirements specified in 1.2.5 and 2.1, the privileges of the holder of a flight instructor rating shall be:

a) to supervise solo flights by student pilots; and

b) to carry out flight instruction for the issue of a private pilot licence, a commercial pilot licence, an instrument rating, and a flight instructor rating provided that the flight instructor:

1. holds at least the licence and rating for which instruction is being given, in the appropriate aircraft category;
2. holds the licence and rating necessary to act as the pilot-in-command of the aircraft on which the instruction is given; and
3. has the flight instructor privileges granted entered on the licence.
2.8.2.2 The applicant, in order to carry out instruction for the multi-crew pilot licence, shall have also met all the instructor qualification requirements.

Note: Specific provisions for flight instructors carrying out instruction for the multi-crew pilot licence exist in Chapter 4 of the Procedures for Air Navigation Services —Training (PANS-TRG, Doc 9868).

2.9 Glider Pilot License

(currently Kuwait DGCA do not issue glider pilot license).

2.9.1 Requirements for the issue of the License:

2.9.1.1 Age - The applicant shall be not less than 16 years of age.

2.9.1.2 Knowledge – The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a glider pilot License, in at least the following subjects:

Air Law

a) rules and regulations relevant to the holder of a glider pilot License; rules of the air; appropriate air traffic services practices and procedures.

Aircraft General Knowledge

b) principles of operation of glider systems and instruments;

c) operating limitations of gliders; relevant operational information from the flight manual or other appropriate document.

Flight performance and planning

d) effects of loading and mass distribution on flight characteristics; mass and balance considerations;

e) use and practical application of launching, landing and other performance data;

f) pre-flight and en-route flight planning appropriate to operations under VFR; appropriate air traffic services procedures; altimeter setting procedures; operations in areas of high-density traffic.

Human Performance

g) human performance relevant to the glider pilot including principles of threat and error management;

Note: Guidance material to design training programmes on human performance, including threat and error management, can be found in the Human Factors Training Manual (Doc 9683).

Meteorology

h) application of elementary aeronautical meteorology; use of, and procedures of obtaining, meteorological information; altimetry.

Navigation

i) practical aspects of air navigation and dead-reckoning techniques; use of aeronautical charts.

Operational procedures

j) use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;
k) different launch methods and associated procedures.

l) Appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather and wake turbulence and other operating hazards.

**Principles of flight**

m) Principles of flight relating to gliders.

**Radiotelephony**

2.9.1.2.2 The applicant shall have demonstrated a level of knowledge appropriate to the privileges to be granted to the holder of a glider pilot License, in radiotelephony procedures and phraseology as appropriate to VFR operations and on action to be taken in case of communication failure.

2.9.1.3 **Experience**

2.9.1.3.1 The applicant shall have completed not less than six hours of flight time as a pilot of gliders including two hours solo flight time during which not less than 20 launches and landings have been performed.

2.9.1.3.1.1 when the applicant has flight time as a pilot of aeroplanes, the DGCA shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of 2.9.1.3.1 can be reduced accordingly.

2.9.1.3.2 The applicant shall have gained, under appropriate supervision, operational experience in gliders in at least the following areas:

a) pre-flight operations, including glider assembly and inspection;

b) techniques and procedures for the launching method used, including appropriate airspeed limitations, emergency procedures and signals used;

c) traffic pattern operations, collision avoidance precautions and procedures;

d) control of the glider by external visual reference;

e) flight throughout the flight envelope;

f) recognition of, and recovery from, incipient and full stalls and spiral dives;

g) normal and cross-wind launches, approaches and landings;

h) cross-country flying using visual reference and dead reckoning;

i) emergency procedures.

2.9.1.4 **Skill**

The applicant shall have demonstrated the ability to perform as pilot-in-command of a glider, the procedures and maneuvers described in 2.9.1.3.2 with a degree of competency appropriate to the privileges granted to the holder of a glider pilot License, and to:

a) recognize and manage threats and errors;

*Note: Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).*
b) operate the glider within its limitations;
c) complete all maneuvers with smoothness and accuracy;
d) exercise good judgment and airmanship;
e) apply aeronautical knowledge; and
f) maintain control of the glider at all times in a manner such that the successful outcome of a procedure or maneuver is assured.

2.9.1.5 Medical Fitness

The applicant shall hold a current Class 2 Medical Assessment.

2.9.2 Privileges of the holder of the License and the conditions to be observed in exercising such privileges

2.9.2.1 Subject to compliance with the requirements specified in 1.2.5, 1.2.6, 1.2.7.1, the privileges of the holder of a glider pilot License shall be to act as pilot-in-command of any glider provided the License holder has operational experience in the launching method used.

2.9.2.2 If passengers are to be carried, the License holder should have completed not less than 10 hours of flight time as a pilot of gliders.

2.10 Free Balloon Pilot License

Note: The provisions of the free balloon pilot License apply to free balloons using hot air or gas.

2.10.1 Requirements for the issue of the licence

(currently Kuwait DGCA do not issue free balloon pilot license).

2.10.1.1 Age - The applicant shall be not less than 16 years of age.

2.10.1.2 Knowledge - The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a free balloon pilot License, in at least the following subjects:

Air law
a) rules and regulations relevant to the holder of a free balloon pilot License; rules of the air; appropriate air traffic services practices and procedures;

Aircraft general knowledge
b) principles of operation of free balloon systems and instruments;
c) operating limitations of free balloons; relevant operational information from the flight manual or other appropriate document;
d) physical properties and practical application of gases used in free balloons;

Flight performance and planning and loading
e) effects of loading on flight characteristics; mass calculations;
f) use and practical application of launching, landing and other performance data, including the effect of temperature;
g) pre-flight and en-route flight planning appropriate to operations under VFR; appropriate air traffic services procedures; altimeter setting procedures; operations in areas of high-density traffic;
**Human performance**

h) Human performance relevant to the free balloon pilot including principles of threat and error management;

*Note:* Guidance material to design training programmes on human performance, including threat and error management, can be found in the Human Factors Training Manual (Doc 9683).

**Meteorology**

i) Application of elementary aeronautical meteorology; use of, and procedures for obtaining, meteorological information; altimetry;

**Navigation**

j) Practical aspects of air navigation and dead-reckoning techniques; use of aeronautical charts;

**Operational procedures**

k) Use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;

l) Appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather, wake turbulence and other operating hazards;

**Principles of flight**

m) Principles of flight relating to free balloons.

**Radiotelephony**

2.10.1.2.2 The applicant shall have demonstrated a level of knowledge appropriate to the privileges to be granted to the holder of a free balloon pilot License, in radiotelephony procedures and phraseology as appropriate to VFR operations and on action to be taken in case of communication failure.

2.10.1.3 **Experience**

2.10.1.3.1 The applicant shall have completed not less than 16 hours of flight time as a pilot of free balloons including at least eight launches and ascents of which one must be solo.

2.10.1.3.2 The applicant shall have gained, under appropriate supervision, operational experience in free balloons in at least the following areas:

a) Pre-flight operations, including balloon assembly, rigging, inflation, mooring and inspection;

b) Techniques and procedures for the launching and ascent, including appropriate limitations, emergency procedures and signals used;

c) Collision avoidance precautions;

d) Control of a free balloon by external visual reference;

e) Recognition of, and recovery from, rapid descents;

f) Cross-country flying using visual reference and dead reckoning;

g) Approaches and landings, including ground handling;

h) Emergency procedures.
2.10.1.3.3 If the privileges of the License are to be exercised at night, the applicant shall have gained, under appropriate supervision, operational experience in free balloons in night flying.

2.10.1.3.4 If passengers are to be carried for remuneration or hire, the licence holder should have completed not less than 35 hours of flight time including 20 hours as a pilot of a free balloon.

2.10.1.4 Skill

The applicant shall have demonstrated the ability to perform as pilot-in-command of a free balloon, the procedures and maneuvers described in 1.4.11.3 with a degree of competency appropriate to the privileges granted to the holder of a free balloon pilot License, and to:

a) recognize and manage threats and errors;

Note: Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

b) operate the free balloon within its limitations;

c) complete all maneuvers with smoothness and accuracy;

d) exercise good judgment and airmanship;

e) apply aeronautical knowledge; and

f) maintain control of the free balloon at all times in a manner such that the successful outcome of a procedure or maneuver is assured.

2.10.1.5 Medical fitness

The applicant shall hold a current Class 2 Medical Assessment.

2.10.2 Privileges of the holder of the License and the conditions to be observed in exercising such privileges

2.10.2.1 Subject to compliance with the requirements specified in, 1.2.5, 1.2.6, 1.2.7.1, 2.1 and 2.10.1.3.4, the privileges of the holder of a free balloon pilot License shall be to act as pilot-in-command of any free balloon provided that the License holder has operational experience in hot air or gas balloons as appropriate.

2.10.2.2 Before exercising the privileges at night, the License holder shall have complied with the requirements specified in 2.10.1.3.3.

2.11 Flight Instructor, Ratings, Authorized Examiner – Aeroplane/ Helicopter.

2.11.1 Applicability

This chapter prescribes the requirements for the issuance of authorized flight instructors/examiners certificates and ratings for selected & maintained personnel by approved training organizations or Air Operators subject to compliance with the requirements specified in this chapter.

Note: For more detailed requirements, please refer to Part 6, Attachment AC.
2.11.2 Grades of authorized Flight Instructors/Examiners.

1) Pilots

i) Category "Route" (Grade 'C') - Route training/Check

ii) Category "Simulator" (Grade 'B') – In addition to (i) Simulator training/Proficiency check

iii) Category "Aircraft" (Grade 'A') - In addition to (ii) Aircraft training/check

iv) Category Instructor – In addition to (iii) conduct AE training and evaluation for upgrading.

2) Flight Engineer

i) Category "Route" (Grade 'C') - Route training/Check

ii) Category "Simulator" (Grade 'B') – In addition to (i) Simulator training/Proficiency check

iii) Category "Aircraft" (Grade 'A') - In additions (ii) Aircraft Training/check

iv) Category Instructor – In addition to (iii) conduct AE training and evaluation for upgrading.

Note1: Authorized flight instructors/examiners are progressively up-graded from grade ‘C’ to ‘B’ to ‘A’ then to Grade Instructor, subject to the operator’s requirements and acceptance of the DGCA.

Note2: The authority granted covers training and renewal check.

2.11.3 Eligibility Requirements

1) Personal suitability in respect of attitude, aptitude, discipline, dedication, devotion professionalism, airmanship, impartiality.

2) Qualification and experience/Pilots

i) Valid Airline Transport Pilot License or equivalent on type.

ii) Minimum experience

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<tr>
<th>Grade</th>
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<td>Category ‘Route’</td>
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<td>Category ‘Instructor’</td>
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3) Qualification and experience / Flight Engineer

i) Valid flight engineer License on type.

ii) Minimum experience, as flight engineer and on type as follows.
2.11.4 Knowledge

The applicant shall have met the knowledge requirements for the issue of an ATPL, as specified in 2.6/2.6.4 as appropriate. In addition, the applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a flight instructor rating, in at least the following areas:

1) Techniques of applied instruction;
2) Assessment of student performance in those subjects in which ground instruction is given;
3) The learning process;
4) Elements of effective teaching;
5) Student evaluation and testing, training, philosophies;
6) Training program development;
7) Lesson planning;
8) Classroom instructional techniques;
9) Use of training aids;
10) Analysis and correction of student errors;
11) Human performance and limitations relevant to flight instruction;
12) Hazards involved in simulating system failures and malfunctions in the aircraft;
13) Broad knowledge of regulation in respect of Personnel Licensing and aircraft operation;
14) Broad knowledge of the Air Operator policies and standard practices; and
15) Thorough technical knowledge of the aircraft operation manuals.

2.11.5 Experience

The applicant shall have met the experience requirements as in part 6 attachment AC.

2.11.6 Flight Instruction

The applicant shall, under the supervision of a flight instructor approved by the Licensing authority for that purpose:

1. Have received instruction in flight instructional techniques including demonstration, student practices, recognition and correction of common student errors; and
2. Have practiced instructional techniques in those flight maneuvers and procedures in which it is intended to provide flight instruction.

2.11.7 Skill

1. The applicant shall have demonstrated satisfactorily in the category of aircraft for which flight instructor privileges are sought, the ability to fly and maneuver the aircraft, and deal with abnormal and emergency situations safely and competently and compliance with the air operator's standards and recommended practices.

2. The applicant shall have demonstrated, in the category of aircraft for which flight instructor privileges are sought, the ability to instruct in those areas in which flight instruction is to be given, including pre-flight, post-flight and ground instruction as appropriate.

2.11.8 Privileges of the holder of the rating and the conditions to be observed in exercising such privileges.

1) To carry out flight instruction/examination for the issue, initial and renewal of:
   a) Private Pilot License
   b) Commercial Pilot License
   c) Airline Transport Pilot License

2) To carry out instrument rating check, initial and renewal if applicable;

3) To carry out flight demonstration, test, and special flight (Ferry) as per the applicable requirements for each flight.

2.11.9 Validity of the certificate

The certificate is valid for 24 months, subject to the validity of the License, and in compliance with the requirements upon which the certificate is issued, and the need of the training organization or the air operator.

2.11.10 Procedures for DGCA authorization and revalidation

For detailed procedures for DGCA authorization and revalidation, reference shall be made to KCASR Part 6, Attachment AC.
CHAPTER 3 – LICENSES FOR FLIGHT CREW MEMBERS OTHER THAN LICENSES FOR PILOTS

3.1 General rules concerning flight navigator and flight engineer Licenses

3.1.1 An applicant shall, before being issued with a flight engineer License, meet such requirements in respect of age, knowledge, experience, skill and medical fitness as are specified for those Licenses.

3.1.1.1 An applicant for a flight navigator licence or flight engineer License shall demonstrate such requirements for knowledge and skill as are specified for those Licenses, in a manner determined DGCA.

3.2 Flight Navigator Licence

3.2.1 Requirements for the issue of the licence

3.2.1.1 Age

The applicant shall be not less than 18 years of age.

3.2.1.2 Knowledge

The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a flight navigator licence, in at least the following subjects:

**Air law**

a) rules and regulations relevant to the holder of a flight navigator licence; appropriate air traffic services practices and procedures;

**Flight performance, planning and loading**

b) effects of loading and mass distribution on aircraft performance;

c) use of take-off, landing and other performance data including procedures for cruise control;

d) pre-flight and en-route operational flight planning; preparation and filing of air traffic services flight plans; appropriate air traffic services procedures; altimeter setting procedures;

**Human performance**

e) human performance relevant to the flight navigator including principles of threat and error management;

**Note:** Guidance material to design training programmes on human performance, including threat and error management, can be found in the Human Factors Training Manual (Doc 9683).

**Meteorology**

f) interpretation and practical application of aeronautical meteorological reports, charts and forecasts; codes and abbreviations; use of, and procedures for obtaining, meteorological information, pre-flight and in-flight; altimetry;

g) aeronautical meteorology; climatology of relevant areas in respect of the elements having an effect upon aviation; the movement of pressure systems; the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions;
Navigation

h) dead-reckoning, pressure-pattern and celestial navigation procedures; the use of aeronautical charts, radio navigation aids and area navigation systems; specific navigation requirements for long-range flights;

i) use, limitation and serviceability of avionics and instruments necessary for the navigation of the aircraft;

j) use, accuracy and reliability of navigation systems used in departure, en-route and approach phases of flight; identification of radio navigation aids;

k) principles, characteristics and use of self-contained and external-referenced navigation systems; operation of airborne equipment;

l) the celestial sphere including the movement of heavenly bodies and their selection and identification for the purpose of observation and reduction of sights; calibration of sextants; the completion of navigation documentation;

m) definitions, units and formulae used in air navigation;

Operational procedures

n) interpretation and use of aeronautical documentation such as AIP, NOTAM, aeronautical codes, abbreviations, and instrument procedure charts for departure, en-route, descent and approach;

Principles of flight

o) principles of flight;

Radiotelephony

p) communication procedures and phraseology.

3.2.1.3 Experience

3.2.1.3.1 The applicant shall have completed in the performance of the duties of a flight navigator, not less than 200 hours of flight time acceptable to DGCA in aircraft engaged in cross-country flights, including not less than 30 hours by night.

3.2.1.3.1.1 When the applicant has flight time as a pilot, DGCA shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of 3.2.1.3.1 can be reduced accordingly.

3.2.1.3.2 The applicant shall produce evidence of having satisfactorily determined the aircraft’s position in flight, and used that information to navigate the aircraft, as follows:

a) by night — not less than 25 times by celestial observations; and

b) by day — not less than 25 times by celestial observations in conjunction with self-contained or external-referenced navigation systems.

3.2.1.4 Skill

The applicant shall have demonstrated the ability to perform as flight navigator of an aircraft with a degree of competency appropriate to the privileges granted to the holder of a flight navigator licence, and to:

a) recognize and manage threats and errors;
Note: Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

b) exercise good judgment and airmanship;

c) apply aeronautical knowledge;

d) perform all duties as part of an integrated crew; and

e) communicate effectively with the other flight crewmembers.

3.2.1.5 Medical fitness

The applicant shall hold a current Class 2 Medical Assessment.

3.2.2 Privileges of the holder of the licence and the conditions to be observed in exercising such privileges

Subject to compliance with the requirements specified in 1.2.5, 1.2.6 and 1.2.7.1, the privileges of the holder of a flight navigator licence shall be to act as flight navigator of any aircraft. If the privileges include radiotelephony communication, the licence holder shall comply with the requirements specified in 1.2.9.2.

3.3 Flight Engineer License

3.3.1 Requirements for the issue of the licence

3.3.1.1 Age – The applicant shall be not less than 18 years of age.

3.3.1.2 Knowledge – The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a flight Engineer License, in at least the following subjects:-

Air Law
a) Rules and regulations relevant to the holder of a Flight Engineer License; rules and regulations governing the operation of civil aircraft pertinent to the duties of a flight engineer.

Aircraft General Knowledge.

b) Basic principles of power-plants, gas turbines and/or piston engines; characteristics of fuels, fuel systems including fuel control; lubricants and lubrication systems, function and operation of engine ignition and started systems;

c) Principles of operation, handling procedures and operating limitations of aircraft power-plants; effects of atmospheric conditions on engine performance;

d) Airframes, flight control, structures, wheel assemblies, brakes and anti-skid units, corrosion and fatigue life, identification structural damage and defect;

e) Ice and rain protection system;

f) Pressurization and air-conditioning systems, oxygen systems;

g) Hydraulic and pneumatic systems;

h) Basic electrical theory, electrical systems (AC and DC), aircraft wiring systems, bonding and screening;
i) Principles of operation of instruments, compasses, autopilots, radio communication equipment, radio and radar navigation aids, flight management systems, display and avionics;

j) Limitations of appropriate aircraft;

k) Fire protection, detection, suppression and extinguishing systems;

l) Use and serviceability checks of equipment and systems appropriate aircraft;

**Flight Performance and Planning and loading**

m) Effects of loading and mass distribution on aircraft handling, flight characteristics and performance; mass and balance calculations;

n) Use of practical application of performance data, including procedures for cruise control;

**Human Performance**

o) Human performance relevant to the Flight Engineer including principles of threat and error management;

*Note: Guidance material to design training programmes on human performance, including threat and error management, can be found in the Human Factors Training Manual (Doc 9683).*

**Operational Performance**

p) Principles of maintenance, procedures for the maintenance of airworthiness, defect reporting, pre-flight inspections, precautionary procedures for fueling and use of external power; installed equipment and cabin system;

q) Normal, abnormal and emergency procedures;

r) Operational procedures for carriage of freight and dangerous goods;

**Principles of Flight**

s) Fundamentals of aerodynamics;

**Radiotelephony**

t) Radiotelephony procedures and phraseology;

3.3.1.2.1 The applicant should have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a flight engineer License in at least the following subjects:

a) fundamentals of navigation; principles and operation of self-contained systems; and

b) operational aspects of meteorology.

3.3.1.3 Experience

3.3.1.3.1 The applicant shall have completed, under the supervision of a person accepted by the Licensing authority for that purpose, not less than 100 hours of flight time in the performance of the duties of a flight engineer. DGCA shall determine whether experience as a flight engineer in a flight simulator, which it has approved, is acceptable as part of the total flight time of 100 hours. Credit for such experience shall be limited to a maximum of 50 hours.
3.3.1.3.1.1 When the applicant has flight time as a pilot, the Licensing authority shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of 3.3.1.3.1 can be reduced accordingly.

3.3.1.3.2 The applicant shall have operational experience in the performance of the duties of a flight engineer, under the supervision of a flight engineer accepted by the Licensing authority for that purpose, in at least the following areas:

a) Normal procedures
   - pre-flight inspections
   - fueling procedures, fuel management
   - inspection of maintenance documents
   - normal flight deck procedures during all phases of flight
   - crew coordination and procedures in case of crew incapacitation
   - defect reporting.

b) Abnormal and alternate (standby) procedures
   - recognition of abnormal functioning of aircraft systems
   - use of abnormal and alternate (standby) procedures

c) Emergency procedures
   - recognition of emergency conditions
   - use of appropriate emergency procedures

3.3.1.4 Skill

3.3.1.4.1 The applicant shall have demonstrated the ability to perform as flight engineer of an aircraft, the duties and procedures described in 3.3.1.3.2 with a degree of competency appropriate to the privileges granted to the holder of a flight engineer License, and to:

a) recognize and manage threats and errors;

Note: Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

b) Use aircraft systems within the aircraft’s capabilities and limitations

c) Exercise good judgment and airmanship;

d) Apply aeronautical knowledge;

e) Perform all the duties as part of an integrated crew with the successful outcome assured; and

f) Communicate effectively with the other flight crewmembers.

3.3.1.4.2 The use of a synthetic flight trainer for performing any of the procedures required during the demonstration of skill described in 3.3.1.4.1 shall be approved by DGCA, which shall ensure that the synthetic flight trainer is appropriate to the task.

3.3.1.5 Medical Fitness

The applicant shall hold a current class 2 Medical Assessment.
3.3.2 **Privileges of the holder of the License and the conditions to be observed in exercising such privileges.**

3.3.2.1 Subject to compliance with the requirements specified in 1.2.5, 1.2.6 and 1.2.7.1, the privileges of the holder of a flight engineer License shall be to act as flight engineer of any type of aircraft on which the holder has demonstrated a level of knowledge and skill, as determined by DGCA on the basis of those requirements specified in 3.3.1.2 and 3.3.1.4 which are applicable to the safe operation of that type of aircraft.

3.3.2.2 The types of aircraft on which the holder of a flight engineer License is authorized to exercise the privileges of that License, shall be entered on the License or recorded elsewhere in a manner acceptable to DGCA.

3.4 **Flight Radiotelephone Operator**

*Note1*: Where the knowledge and skill of an applicant have been established as satisfactory in respect of the certification requirements for the radiotelephone operator's restricted certificate specified in the general radio regulations annexed to the International Telecommunication Convention and the applicant has met the requirements that are pertinent to the operation of the radiotelephone on board an aircraft, a Contracting State may endorse a licence already held by the applicant (as provided for in 5.1.1.2 XIII) or issue a separate licence as appropriate.

*Note2*: Skill and knowledge requirements on radiotelephony procedures and phraseology have been developed as an integral part of all aeroplane, airship, helicopter and powered-lift pilot licences.
CHAPTER 4 - LICENSES AND RATINGS FOR PERSONNEL OTHER THAN FLIGHT CREW MEMBERS

4.1 General Rules concerning License and ratings for personnel other than flight crew members.

4.1.1 An applicant shall, before being issued with any License or rating for personnel other than flight crew members, meet such requirements in respect of age, knowledge, experience and where appropriate, medical fitness and skill, as are specified for that License or rating.

4.1.2 An applicant, for any License or rating for personnel other than flight crew members, shall demonstrate, in a manner determined by DGCA, such requirements in respect of knowledge and skill as are specified for that License or rating.

4.1.3 No Air Operator shall permit a person to act and no person shall act as a Flight Operation Officer/Dispatcher or Cabin Crew Member unless he/she holds a licence/Certificate issued by the DGCA.

4.1.4 A Flight Operation Officer /Dispatcher or Cabin Crew Member, when employed in conjunction with an approved method of flight supervision shall be trained and licensed /certified in accordance with KCASR's Part 1 and Part 6.

4.1.5 Each person who holds a Flight Operation Officer /Dispatcher or Cabin Crew Member licence /Certificate issued by the DGCA shall present it for inspection upon the request of the DGCA.

4.1.6 Holders of licence/certificates issued in accordance with this Part shall strictly adhere to the general regulatory requirements for personnel Licensing and certification detailed in this Part.

4.2 Aircraft Maintenance Engineer

Note: The terms in brackets are given as acceptable additions to the title of the License.

4.2.1 Requirements for the issue of the License

4.2.1.1 Age

The applicant shall be not less than 18 years of age. However the minimum age for certifying staff and category B1 and B2 support staff is 21 years. (refer to KCASR part-145 item 145.A.35.m).

4.2.1.2 Knowledge

The applicant shall have demonstrated a level of knowledge relevant to the privileges to be granted and appropriate to the responsibilities of an aircraft maintenance License holder, in at least the following subjects:

Air law and airworthiness requirements

a) rules and regulations relevant to an aircraft maintenance License holder including applicable airworthiness requirements governing certification and continuing airworthiness of aircraft and approved aircraft maintenance organization and procedures;

Natural science and aircraft general knowledge

b) basic mathematics; units of measurement; fundamental principles and theory of physics and chemistry applicable to aircraft maintenance;
Aircraft engineering

c) characteristics and applications of the materials of aircraft construction including principles of construction and functioning of aircraft structures, fastening techniques; powerplants and their associated systems; mechanical, fluid, electrical and electronic power sources; aircraft instrument and display systems; aircraft control systems; and airborne navigation and communication systems;

Aircraft maintenance

d) tasks required to ensure the continuing airworthiness of an aircraft including methods and procedures for the overhaul, repair, inspection, replacement, modification or defect rectification of aircraft structures, components and systems in accordance with the methods prescribed in the relevant Maintenance Manuals and the applicable Standards of airworthiness; and

Human performance

e) human performance, including principles of threat and error management, relevant to aircraft maintenance.

Note: Guidance material to design training programmes on human performance, including threat and error management, can be found in the Human Factors Training Manual (Doc 9683).

4.2.1.3 Experience

(a) The applicant shall have had the following experience in the inspection, servicing and maintenance of aircraft or its components:

1. for category A and subcategories B1.2 and B1.4:
   i. three years of practical maintenance experience on operating aircraft, if the applicant has no previous relevant technical training; or
   ii. two years of practical maintenance experience on operating aircraft and completion of training considered relevant by the DGCA as a skilled worker, in a technical trade; or
   iii. one year of practical maintenance experience on operating aircraft and completion of a Part-147 approved basic training course.

2. for category B2 and subcategories B1.1 and B1.3:
   i. five years of practical maintenance experience on operating aircraft if the applicant has no previous relevant technical training; or
   ii. three years of practical maintenance experience on operating aircraft and completion of training considered relevant by the DGCA as a skilled worker, in a technical trade; or
   iii. two years of practical maintenance experience on operating aircraft and completion of a Part -147 approved basic training course.
3. for category C with respect to large aircraft:
   i. three years of experience exercising category B1.1, B1.3 or B2 privileges on large aircraft or as Part-145 B1.1, B1.3 or B2 support staff, or, a combination of both; or
   ii. five years of experience exercising category B1.2 or B1.4 privileges on large aircraft or as Part-145 B1.2 or B1.4 support staff, or, a combination of both; or

4. for category C with respect to non-large aircraft: three years of experience exercising category B1 or B.2 privileges on non-large aircraft or as Part-145 B1 or B.2 support staff, or a combination of both; or

5. for category C obtained through the academic route:
   an applicant holding an academic degree in a technical discipline, from a university or other higher educational institution recognised by the DGCA, three years of experience working in a civil aircraft maintenance environment on a representative selection of tasks directly associated with aircraft maintenance including six months of observation of base maintenance tasks.

b) Experience requirements.

Each applicant for an AME License must present either an appropriate graduation certificate from a recognized aircraft maintenance engineering institute, a certificate of completion from a certified aviation maintenance school, or documentary evidence satisfactory to the DGCA with the equivalent number of years of experience from an airline or maintenance organization after high school.

4.2.1.4 Training

The applicant should have completed a course of training appropriate to the privileges to be granted.

Note: ICAO Doc 7192 - The Training Manual, Part D-1, contains guidance material on a training course for applicants for an aircraft maintenance License.

4.2.1.5 Skill

The applicant shall have demonstrated the ability to perform those functions applicable to the privileges to be granted.

4.2.2 Privileges of the holder of the License and the conditions to be observed in exercising such privileges

4.2.2.1 Subject to compliance with the requirements specified in 4.2.2.2 and 4.2.2.3, the privileges of the holder of an aircraft maintenance License shall be to certify the aircraft or parts of the aircraft as airworthy after an authorized repair, modification or installation of a power-plant, accessory, instrument, and/or item of equipment, and to sign a maintenance release following inspection, maintenance operations and/or routine servicing.

4.2.2.2 The privileges of the holder of an aircraft maintenance License specified in 4.2.2.1 shall be exercised only:

   i) in respect of such:
A) aircraft as are entered on the License in their entirety either specifically or under broad categories; or

B) airframes and powerplants and aircraft systems or components as are entered on the License either specifically or under broad categories; and/or

C) aircraft avionic systems or components as are entered on the License either specifically or under broad categories;

ii) provided that the License holder is familiar with all the relevant information relating to the maintenance and airworthiness of the particular aircraft for which the License holder is signing a Maintenance Release, or such airframe, powerplant, aircraft system or component and aircraft avionic system or component which the License holder is certifying as being airworthy; and

iii) on condition that, within the preceding 24 months, the License holder has either had experience in the inspection, servicing or maintenance of an aircraft or components in accordance with the privileges granted by the License held for not less than six months, or has met the provision for the issue of a License with the appropriate privileges, to the satisfaction DGCA.

4.2.2.3 The Licensing authority shall prescribe the scope of the privileges of the License holder in terms of the complexity of the tasks to which the certification relates.

4.2.2.3.1 Details of the certification privileges should be endorsed on or attached to the License, either directly or by reference to another document issued by DGCA.

4.2.2.4 When Kuwait DGCA authorizes an approved maintenance organization to appoint non-licensed personnel to exercise the privileges of 4.2.2, the person appointed shall meet the requirements specified in 4.2.1.

4.2.3 Types of Licenses issued.

The DGCA issues the following Licenses under this Part for applicants meeting the theoretical and practical requirements defined for each License as specified in KCASR’s – Part 66 – Aircraft Maintenance Licensing.

4.2.3.1 Additional privileges and ratings.

A Licensed AME may perform alteration, repair (excluding major repairs and major alteration), inspection and return-to-service of any aviation product only if his License is endorsed with the proper type-rating relevant to the product.

4.2.3.2 Recent experience requirements.

ALicensed AME may not exercise the privileges of his License and type-rating unless, within the preceding 24 months:

(a) The DGCA Administrator has found that he is able to do that work, or

(b) He has, for at least 6 months:

(1) Served as an Aircraft Maintenance Engineer under his License and type rating.

(2) Technically supervised other AMEs.
(3) Supervised, in an executive capacity, the maintenance or alteration of aviation products.

(4) Been engaged in any combination of (b) (1), (2) or (3) of this section.

4.2.3.3 General privileges and limitations.

An Aircraft Maintenance Engineer’s License shall authorize the holder, subject to such conditions as may be specified in the License, to issue:

i) Certificates of Maintenance Review with respect to such aircraft as may be so specified.

ii) Certificates of Release-to-Service with respect to such overhauls, repairs, replacements, modifications, maintenance and inspections of such aircraft, engines and other aeronautical products as may be so specified, or

iii) Certificates of Fitness to be issued for aircraft for the purpose of test flight.

4.3 Student air traffic controller

4.3.1 An appropriate measures shall be taken to ensure that student air traffic controllers do not constitute a hazard to air navigation.

4.3.2 Medical fitness

A student air traffic controller shall not be permitted to receive instruction in an operational environment unless that student air traffic controller holds a current Class 3 Medical Assessment.

4.4 Air traffic controller License

4.4.1 Requirements for the issue of the licence

The applicant shall meet the requirements of 4.4.1 and the requirements of at least one of the ratings set out in 4.5. Unlicensed State employees may operate as air traffic controllers on condition that they meet the same requirements.

4.4.1.1 Age

The applicant shall be not less than 21 years of age.

4.4.1.2 Knowledge

The applicant shall have demonstrated a level of knowledge appropriate to the holder of an air traffic controller License, in at least the following subjects:

Air law

a) rules and regulations relevant to the air traffic controller; Air traffic control equipment

b) principles, use and limitations of equipment used in air traffic control;

General knowledge

c) principles of flight; principles of operation and functioning of aircraft, powerplants and systems; aircraft performances relevant to air traffic control operations;
Human performance

d) human performance including principles of threat and error management;

Note: Guidance material to design training programmes on human performance can be found in the Human Factors Training Manual (Doc 9683).

Meteorology

e) aeronautical meteorology; use and appreciation of meteorological documentation and information; origin and characteristics of weather phenomena affecting flight operations and safety; altimetry;

Navigation

f) principles of air navigation; principle, limitation and accuracy of navigation systems and visual aids; and

Operational procedures

g) air traffic control, communication, radiotelephony and phraseology procedures (routine, non-routine and emergency); use of the relevant aeronautical documentation; safety practices associated with flight.

4.4.1.3 Experience

The applicant shall have completed an approved training course and not less than three months’ satisfactory service engaged in the actual control of air traffic under the supervision of an appropriately rated air traffic controller. The experience requirements specified for air traffic controller ratings in 4.5 may be credited as part of the experience specified in this paragraph.

4.4.1.4 Medical fitness

The applicant shall hold a current Class 3 Medical Assessment.

4.5 Air traffic controller ratings

4.5.1 Categories of air traffic controller ratings

1) Air traffic controller ratings shall comprise the following categories:

a) aerodrome control rating;

b) approach control procedural rating;

c) approach radar control surveillance rating;

d) approach precision radar control rating;

e) area control procedural rating; and

f) area radar control surveillance rating.

Note: The World Meteorological Organization has specified requirements for personnel making meteorological observations which apply to air traffic controllers providing such a service.

4.5.2 Requirements for air traffic controller ratings

4.5.2.1 Knowledge

The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted, in at least the following subjects in so far as they affect the area of responsibility:
a) **aerodrome control rating:**
   1) aerodrome layout; physical characteristics and visual aids;
   2) airspace structure;
   3) applicable rules, procedures and source of information;
   4) air navigation facilities;
   5) air traffic control equipment and its use;
   6) terrain and prominent landmarks;
   7) characteristics of air traffic;
   8) weather phenomena; and
   9) emergency and search and rescue plans;

b) **approach control procedural and area control procedural ratings:**
   1) airspace structure;
   2) applicable rules, procedures and source of information;
   3) air navigation facilities;
   4) air traffic control equipment and its use;
   5) terrain and prominent landmarks;
   6) characteristics of air traffic and traffic flow;
   7) weather phenomena; and
   8) emergency and search and rescue plans; and

c) **approach control surveillance, approach precision radar and area control surveillance ratings:**
   The applicant shall meet the requirements specified in b) in so far as they affect the area of responsibility, and shall have demonstrated a level of knowledge appropriate to the privileges granted, in at least the following additional subjects:
   1) principles, use and limitations of applicable ATS surveillance systems and associated equipment; and
   2) procedures for the provision of ATS surveillance services, as appropriate, including procedures to ensure appropriate terrain clearance.

### 4.5.2.2 Experience

#### 4.5.2.2.1

The applicant shall have:

a) satisfactorily completed an approved training course;

b) provided, satisfactorily, under the supervision of an appropriately rated air traffic controller:
   1) **aerodrome control rating:** an aerodrome control service, for a period of not less than 90 hours or one month, whichever is greater, at the unit for which the rating is sought;
   2) **approach control procedural, approach control surveillance, area or area control surveillance rating:** the control service for which the rating is sought, for a period of not less than 180 hours or three months, whichever is greater, at the unit for which the rating is sought; and
3) **approach precision radar control rating**: not less than 200 precision approaches of which not more than 100 shall have been carried out on a radar simulator approved for that purpose by the Licensing Authority. Not less than 50 of those precision approaches shall have been carried out at the unit and on the equipment for which the rating is sought; and

c) if the privileges of the approach radar control surveillance rating include surveillance radar approach duties, the experience shall include not less than 25 plan position indicator (PPI) approaches on the surveillance equipment of the type in use at the unit for which the rating is sought and under the supervision of an appropriately rated controller.

4.5.2.2.2 The experience specified in 4.5.2.2.1 b) shall have been completed within the 6-month period immediately preceding application.

4.5.2.2.3 When the applicant already holds an air traffic controller rating in another category, or the same rating for another unit, DGCA shall determine whether the experience requirement of 4.5.2.2 can be reduced, and if so, to what extent.

4.5.2.3 **Skill**

The applicant shall have demonstrated, at a level appropriate to the privileges being granted, the skill, judgment and performance required to provide a safe, orderly and expeditious control service, including the recognition and management of threat and errors.

*Note*: Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (Doc 9868, PANS-TRG), Chapter 3, Attachment C, in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683) and in Cir 314, Threat and Error Management (TEM) in Air Traffic Control.

4.5.2.4 **Concurrent issuance of two air traffic controller ratings**

When two air traffic controller ratings are sought concurrently DGCA shall determine the applicable requirements on the basis of the requirements for each rating. These requirements shall not be less than those of the more demanding rating.

4.5.3 **Privileges of the holder of the air traffic controller rating(s) and the conditions to be observed in exercising such privileges**

1) Subject to compliance with the requirements specified in 1.2.5, 1.2.6, 1.2.7.1 and 1.2.9, the privileges of the holder of an air traffic controller License endorsed with one or more of the under-mentioned ratings shall be:

a) **aerodrome control rating**: to provide or to supervise the provision of aerodrome control service for the aerodrome for which the License holder is rated;

b) **approach control procedural rating**: to provide or to supervise the provision of approach control service for the aerodrome or aerodromes for which the License holder is rated, within the airspace or portion thereof, under the jurisdiction of the unit providing approach control service;
c) **approach control surveillance rating**: to provide and/or supervise the provision of approach control service with the use of radar or other surveillance systems for the aerodrome or aerodromes for which the License holder is rated, within the airspace or portion thereof, under the jurisdiction of the unit providing approach control service;

   1) subject to compliance with the provisions of 4.5.2.2.1 c), the privileges shall include the provision of surveillance radar approaches;

d) **approach precision radar control rating**: to provide and/or supervise the provision of precision approach radar service at the aerodrome for which the License holder is rated;

e) **area control procedural rating**: to provide and/or supervise the provision of area control service within the control area or portion thereof, for which the License holder is rated; and

f) **area control surveillance rating**: to provide and/or supervise the provision of area control service with the use of an ATS surveillance system, within the control area or portion thereof, for which the License holder is rated.

4.5.3.2 Before exercising the privileges indicated in 4.5.3.1, the License holder shall be familiar with all pertinent and current information.

4.5.3.3 Holder of an air traffic controller License shall not carry out instruction in an operational environment unless the holder has received proper authorization from Kuwait DGCA.

4.5.3.4 **Validity of ratings**

   A rating shall become invalid when an air traffic controller has ceased to exercise the privileges of the rating for a period determined by the Licensing Authority. That period shall not exceed six months. A rating shall remain invalid until the controller's ability to exercise the privileges of the rating has been re-established.

4.6 **Flight Operations Officer / Flight Dispatcher Licence**

4.6.1 **Requirements for the issue of licence**

4.6.1.1 **Age**

   The applicant shall be not less than 21 years of age.

4.6.1.2 **Knowledge**

   The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a flight operations officer License, in at least the following subjects:

   **Air law**

   a) rules and regulations relevant to the holder of a flight operations officer License; appropriate air traffic services practices and procedures;

   **Aircraft general knowledge**

   b) principles of operation of aeroplane powerplants, systems and instruments;

   c) operating limitations of aeroplanes and powerplants;

   d) minimum equipment list;
**Flight performance calculation and planning procedures and loading**

e) effects of loading and mass distribution on aircraft performance and flight characteristics; mass and balance calculations;

f) operational flight planning; fuel consumption and endurance calculations; alternate airport selection procedures; en-route cruise control; extended range operation;

g) preparation and filing of air traffic services flight plans;

h) basic principles of computer-assisted planning systems;

**Human performance**

i) human performance relevant to dispatch duties including principles of threat and error management.

**Note:** Guidance material to design training programmes on human performance including principles of threat and error management can be found in the Human Factors Training Manual (Doc 9683).

**Meteorology**

j) aeronautical meteorology; the movement of pressure systems; the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions;

k) interpretation and application of aeronautical meteorological reports, charts and forecasts; codes and abbreviations; use of, and procedures for obtaining, meteorological information;

**Navigation**

l) principles of air navigation with particular reference to instrument flight;

**Operational procedures**

m) use of aeronautical documentation;

n) operational procedures for the carriage of freight and dangerous goods;

o) procedures relating to aircraft accidents and incidents; emergency flight procedures;

p) procedures relating to unlawful interference and sabotage of aircraft;

Principles of flight

q) principles of flight relating to the appropriate category of aircraft; and

Radio communication

r) procedures for communicating with aircraft and relevant ground stations.

4.6.1.3 Experience

The applicant shall have gained the following experience:

a) a total of two years’ service in any one or in any combination of the capacities specified in 1 to 3 inclusive, provided that in any combination of experience the period serviced in any capacity shall be at least one year:
1. a flight crew member in air transportation; or
2. a meteorologist in an organization dispatching aircraft in air transportation; or
3. an air traffic controller; or a technical supervisor of flight operations officers or air transportation flight operations systems; or

b) at least one year as an assistant in the dispatching of air transport; or

All applicants shall satisfactorily complete an approved initial dispatcher training course.

4.6.1.3.2 The applicant shall have served under the supervision of a flight operations officer for at least 90 working days within the six months immediately preceding the application.

4.6.1.4 Skill

The applicant shall have demonstrated the ability to:

a) make an accurate and operationally acceptable weather analysis from a series of daily weather maps and weather reports; provide an operationally valid briefing on weather conditions prevailing in the general neighborhood of a specific air route; forecast weather trends pertinent to air transportation with particular reference to destination and alternates;

b) determine the optimum flight path for a given segment, and create accurate manual and/or computer generated flight plans; and

c) provide operating supervision and all other assistance to a flight in actual or simulated adverse weather conditions, as appropriate to the duties of the holder of a flight operations officer License.

d) recognize and manage threats and errors.

Note: Guidance material on the application of threat and error management is found in the Procedures for Air Navigation Services — Training (Doc 9868, PANS-TRG), Chapter 3, Attachment C, and in Part II, Chapter 2, of the Human Factors Training Manual (Doc 9683).

4.6.2 Privileges of the holder of the License and conditions to be observed in exercising such privileges.

Subject to compliance with requirements specified in 1.2.5, the privileges of the holder of a flight operations officer License shall be to serve in that capacity with responsibility for each area for which the applicant meet the requirements specified in Part 6 of KCASR’s.

4.6.3 Flight Operation Officer / Dispatcher Training

The Air Operator shall provide training in those subjects that apply specifically to the individual Air Operator’s Flight Operations and Operational Control System. The Air Operator’s Flight Dispatcher Training Program shall be approved by the DGCA.

Flight Dispatcher training includes the course itself, on-the-job training, cockpit familiarization, and a competency check. Recurrent training shall be given to each Flight Dispatcher once every 24 months.
4.6.4 Flight Operation Officer / Dispatcher Instructors

1) Flight Dispatcher training instructors shall be knowledgeable and able to present their subject in an effective manner.

2) Where the instructors used to teach course material are not themselves qualified Flight Operation Officer / Dispatcher, a qualified Flight Dispatcher shall be available for coordinating and answering questions relating to the practical application of the course material.

4.6.5 On-the-Job Training

On-the-job training shall consist of a specified period of time during which the Flight Dispatcher candidate will perform the duties of a Flight Dispatcher under the direct supervision of a fully qualified Flight Dispatcher who is employed by the Air Operator. Each Air Operator shall specify the minimum duration of on-the-job training in its Company Operations Manual or Approved Training Manual, and the conditions of this training shall be arranged so that effective operational control is maintained.

4.6.6 Cockpit Familiarization Training

In order to provide Flight Operation Officer / Dispatcher and Flight Dispatcher candidates with practical experience of Flight Operations and the operational control system exercised by the Air Operator, the Air Operator shall provide cockpit familiarization training as part of both initial and recurrent training. The duration of this familiarization Training shall be specified in the Air Operator's Flight Dispatcher training program, which must be submitted to the DGCA for approval.

4.6.7 Competency Checks

1) After completion of on-the-job training, each Flight Dispatcher shall undergo a competency check administered by a DGCA approved Flight Dispatcher Instructor employed by the Air Operator. In addition, each Flight Dispatcher must pass an annual competency check to be conducted after successful completion of recurrent training.

2) The competency check shall take place during an operating shift and shall consist of an evaluation by direct observation of the Flight Dispatcher’s competency, as applicable, in the following:
   a) Basic job skills and knowledge;
   b) Kuwait Civil Aviation Safety Regulations and Kuwait Civil Aviation Notices and Instructions relevant to a Flight Dispatcher and the Air Operator’s Flight Operations and Operational Control System;
   c) Flight Duty Time Limitations (FDTL);
   d) Air Operator’s operational control policies and procedures;
   e) Air Operator’s Operations Manuals;
   f) Aircraft performance analysis;
   g) Flight planning procedures and over flight clearances;
   h) Air Operator emergency and abnormal procedures through actual observation or simulated through questioning;
   i) Knowledge of the latest recurrent training and interim operating directives;
j) The Air Operator’s administrative procedures relating to flight operations;
k) Knowledge relating to the interface between operations coordination and operational control functions;
l) Ability to prioritize and organize workload;
m) Communications skills and procedures;
n) Accuracy and thoroughness of work, in particular that relating to flight planning;
o) Assessment of alternates and their suitability;
p) Ability to anticipate changes;
q) Liaison ability with deck crew members and other Air Operator departments;
r) Ability to analyze weather, perform weather watch, and understand the effects of weather changes;
s) Ability to brief deck crew and other Flight Operation Officer/Dispatcher on operational matters;
t) Ability to use and understand Notices to Airmen (NOTAMs);
u) Ability to contact aircraft(s) during the Flight Watch stage and quickly and accurately forward information to flight crew members;
v) Ability to plan for abnormal operations, such as landing gear malfunctions, surface contamination, and anti-skid inoperative, etc.;
w) Knowledge of ATC procedures, such as flow control, delay programs, and re-routings, etc.;
x) Knowledge of Extended Range Twin-Engine Operations (ETOPS);
y) Minimum Navigation Performance Specifications (MNPS);
z) Reduced Vertical Separation Minimum (RVSM); and
aa) Human Factors relevant to dispatch duties.

3) The duration and results of the competency check, together with certification of the Flight Dispatcher’s competency to perform operational duties shall be recorded on a competency check form, which once completed, shall be included on the Flight Dispatcher’s training record.

4.6.8 Recurrent Training

Recurrent training shall cover those subjects specified in this standard for recurrent training at least once every two years, and it shall include cockpit familiarization.

4.6.8.1 Where a previously qualified Flight Dispatcher has been absent from his duties with an Air Operator for a period in excess of 90 days, that Flight Dispatcher shall be given a briefing on all of the changes to the Air Operator’s policies and procedures that occurred during his absence. The briefings shall be followed by a successful competency check by a DGCA approved Flight Dispatcher Instructor.
4.6.8.2 Where a previously qualified Flight Dispatcher has not actively dispatched with an Air Operator for a period in excess of 12 months, that Flight Dispatcher shall undergo a course of refresher training that will include recurrent training and cockpit familiarization training. Requalification training shall be followed by a successful competency check by a DGCA approved Flight Dispatcher Instructor.

4.6.9 New Route Training

When a Flight Dispatcher is introduced a new route that requires different procedures, that person shall undergo training to acquire the knowledge required for the new area of responsibility. This training shall include at least the following:

1) a period of familiarization training on the facilities and aircraft types being dispatched;
2) monitoring during an operating shift by a qualified Flight Dispatcher on that route for each new area of Flight Dispatch responsibility; and
3) a certification of competency on the Flight Dispatcher’s training record by the person who conducted the monitor.

4.6.10 Aircraft Type Transition Training

4.6.10.1 When applying to add a new aircraft type to its Air Operator Certificate, an Air Operator shall submit a syllabus for Flight Dispatcher Aircraft Type Transition Training to the DGCA for approval.

4.6.10.2 The Flight Dispatcher shall successfully complete a Flight Operation Officer / Dispatcher Course with the aircraft manufacturer or by the Air Operator’s Training Organization.

4.6.11 Validity

The licence is valid for 24 Months plus the reminder of the month of the issue.

4.7 Aeronautical station operator licence

Note: This licence is not intended for personnel providing Aerodrome Flight Information Service (AFIS). Guidance on the qualifications to be met by these personnel can be found in Circular 211, Aerodrome Flight Information Service (AFIS).

4.7.1 Requirements for the issue of the licence

4.7.1.1 Before issuing an aeronautical station operator licence, a Contracting State shall require the applicant to meet the requirements of 4.7.1. Unlicensed individuals may operate as aeronautical station operators on the condition that the State from which they operate ensures that they meet the same requirements.

4.7.1.2 Age

The applicant shall be not less than 18 years of age.

4.7.1.3 Knowledge

The applicant shall have demonstrated a level of knowledge appropriate to the holder of an aeronautical station operator, in at least the following subjects:

General knowledge
a) air traffic services provided within the State;
Operational procedures
b) radiotelephony procedures; phraseology; telecommunication network;

Rules and regulations
c) rules and regulations applicable to the aeronautical station operator; and

Telecommunication equipment
d) principles, use and limitations of telecommunication equipment in an aeronautical station.

4.7.1.4 Experience
The applicant shall have:
a) satisfactorily completed an approved training course within the 12-month period immediately preceding application, and have served satisfactorily under a qualified aeronautical station operator for not less than two months; or
b) satisfactorily served under a qualified aeronautical station operator for not less than six months during the 12-month period immediately preceding application.

4.7.1.5 Skill
The applicant shall demonstrate, or have demonstrated, competency in:-
a) operating the telecommunication equipment in use; and
b) transmitting and receiving radiotelephony messages with efficiency and accuracy.

4.7.2 Privileges of the aeronautical station operator and the conditions to be observed in exercising such privileges
Subject to compliance with the requirements specified in 1.2.5 and 1.2.9, the privileges of the holder of an aeronautical station operator licence shall be to act as an operator in an aeronautical station. Before exercising the privileges of the licence, the holder shall be familiar with all pertinent and current information regarding the types of equipment and operating procedures used at that aeronautical station.

4.8 Aeronautical Meteorological Personnel
Note: The requirements for training and qualifications for all aeronautical meteorological personnel are the responsibility of the World Meteorological Organization (WMO) in accordance with the Working Arrangements between the International Civil Aviation Organization and the World Meteorological Organization (Doc 7475). The requirements can be found in WMO Document 258 — Guidelines for the education and training of personnel in meteorology and operational hydrology — Volume I: Meteorology.

4.9 Cabin Crew Member
4.9.1 Minimum Qualifications
4.9.1.1 The major function of cabin crew member’s responsibility for the safety and well-being of passengers in the aircraft cabin make it essential that a minimum standard of medical standard, knowledge, age and other qualifications are met.
Specification of minimum standards helps ensure that individuals selected will be capable of mastering the training program and will be able to perform the required safety and emergency duties. Without such minimum standards, cabin crew may not be able to develop the authority or self-confidence to lead an evacuation or manage other cabin emergencies. Cabin crew must be able to read and understand written instructions, exercise good judgement and communicate effectively to flight crew members, fellow cabin crew members and passengers in an emergency.

4.9.1.2 The following requirements, applicable to cabin crew, are indicative of the minimum qualifications recommended:

**Education:** High school (12 years of schooling or more) or an equivalent degree;

**Age:** Minimum of 18 years;

**Height:** Able to reach safety equipment and open and close overhead bins in the aircraft from standing position;

**Weight:** Able to:
- Move comfortably down the aisle, single file, facing forward;
- Pass quickly through the smallest secondary cabin emergency exit window;

**English Language:** Acceptable level reading, righting and speaking of English language.

**Medical:** Shall meet Class 2 Medical Standards

4.9.2 Types of Training

4.9.2.1 Basically, regulatory provisions require that cabin crew annually complete the training program established by the operator. They also require cabin crew to be knowledgeable about the location and operation of safety and emergency equipment for each type of aircraft on which they operate and to be trained to deal with both normal and emergency safety situations including relevant communication and crew co-ordination procedures.

4.9.2.2 *Initial Training* is required for persons who have not been previously employed by the airline as cabin crew member. To be effective, initial training should be rapidly complemented by line indoctrination. Initial training shall ensure that each trainee acquires the knowledge necessary to fulfill the responsibilities and duties assigned to cabin crew members in the interest of safety. This will be primarily accomplished through classroom instruction complemented by a series of drills, exercises and hands-on training on safety and emergency procedures designed to provide the trainees with the skills necessary to perform their duties. The operator must establish minimum time of line indoctrination, approved by the Kuwait DGCA, for each aircraft type in its fleet. Each trainee must complete at least one check ride of sufficient duration to permit the trainee to perform, and be checked on, all pre-flight, pre-landing and post-landing duties. Additional training and checking may be performed on simulators, depending on the technical capabilities of the device; for example, exercises involving emergency lights, operable galley equipment, smoke or other technical capabilities may be performed on a simulator capable of producing the appropriate environment.
4.9.2.3 Line indoctrination shall be accomplished with an acceptable student-to-instructor ratio; ideally one student to one instructor up to maximum of four to one, if there is more that one student per instructor. Safeguards must be in place to assure proper supervision, training and evaluation by the instructor. Indoctrination must have taken place before a cabin crew member performs duties as a required cabin crew member. Cabin crew members on line indoctrination are on board the aircraft for training purposes and must not be considered as part of the required minimum number of cabin crew members for flight. Line indoctrination must be initiated within 15 days of fulfilling the requirements of the ground training portion of the operator’s approved training program.

4.9.2.4 *Recurrent Training* is required to be performed each twelve-month period following initial of previous recurrent training. It is primarily provided to ensure the maintenance of knowledge and skills through a series of drills, exercise, quizzes, etc. and to familiarize crew members with new procedures and/or equivalent equipment introduced since their last training. Cabin crew members rarely get the opportunity to practice most of the skills which have been learned during initial training and are needed in an emergency. Like many skills which require periodic exercise, these skills are perishable. And since high stress levels or panic will degrade previously learned skills, rehearsal and continuing training is essential. Recurrent ensures the maintenance of such skills and their effective application as required.

4.9.2.5 *Aircraft Type Training* is required in order to qualify and maintain qualification on each type of aircraft to which the cabin crew member will be assigned to duty.

4.9.2.6 *Human Performance* relevant to cabin crew duties and responsibilities.

4.9.3 *Cabin Crew Leader*

The operator shall establish selection criteria for leader post in terms of minimum knowledge, experience, technical abilities, and personnel qualification of tact, initiative, and effective communication.

4.9.4 *Operation of more than one type*

Subject to the detailed requirements and restrictions specified in KCASR, Part 6 and specific documented arrangement with the Air Operator, cabin crew member are allowed to operate more than one type.

4.9.5 *Approval of Training Courses*

Training syllabus shall be in line with DGCA document for "Cabin Crew Training Standards" and shall be included in the company operation manual.

4.9.6 *Revision of Course Syllabus*

Requests for revising a training course syllabus shall be submitted in writing to the DGCA for approval. These revisions shall be submitted in such form that the entire page or pages of the existing syllabus can be removed and replaced.
4.9.7 Training Records

A training record shall be kept for each Cabin Crew Member who is employed by the Air Operator. This record shall contain information on all the training completed by the Cabin Crew Member, including results of all recent examination, copies of all other examinations taken in the previous three years, records of on-the-job training, and all certifications of competency.

4.9.8 Validity

The certificate is valid for 24 Months plus the reminder of the month of the issue, subject to the validity of certain documents specified in the Personnel Licensing Procedures Manual.

4.9.9 Flight Radiotelephone Operator

Note1: Where the knowledge and skill of an applicant have been established as satisfactory in respect of the certification requirements for the radiotelephone operator’s restricted certificate specified in the general radio regulations annexed to the International Telecommunication Convention and the applicant has met the requirements that are pertinent to the operation of the radiotelephone on board an aircraft, a Contracting State may endorse a License already held by the applicant or issue a separate License as appropriate.

Note2: Skill and knowledge requirements on radiotelephony procedures and phraseology have been developed as an integral part of all pilot aeroplane and helicopter Licenses.
CHAPTER 5 - SPECIFICATION FOR PERSONNEL LICENSES.

5.1 General
Personnel Licenses issued by the DGCA in accordance with the relevant provisions of this part shall conform to the following specification.

5.1.1 Detail
DGCA having issued a licence shall ensure that other States are able to easily determine the licence privileges and validity of ratings.

Note: Operator records or a flight crew member's personal log book, in which maintenance of competency and recent experience may be satisfactorily recorded, are not normally carried on international flights.

The following details shall appear on the License:

i) Name of the State (in bold type);
ii) Title of License (in very bold type);
iii) Serial number of the License, in Arabic numerals; given by the authority issuing the licence;
iv) Name of the holder in full (in Roman alphabet also if script of national language is other than Roman);
v) Date of birth;
vii) Address of holder;
viii) Nationality of holder;
ix) Signature of holder;
x) Authorized Signature and issuing date;
x) Certification concerning validity and authorization for holder to exercise privileges appropriate to License;
xii) Signature of officer issuing the licence and the date of such issue;
xiii) Seal or stamp of Kuwait DGCA;
xiv) Ratings, e.g. category, class, type aircraft, airframe, aerodrome control etc.;
xv) Remarks, i.e. Special endorsements relating to limitations and endorsements for privileges; including from 5 March 2008 an endorsement of language proficiency, and other information required in pursuance to Article 39 of the Chicago Convention;
xvi) Any other details desired by the Licensing authority;

5.1.2 Material
First quality paper or other suitable material shall be used and the items mentioned in 1.7.2 shown clearly.

5.1.3 Language
When licences are issued in a language other than English, the licence shall include an English translation of at least items i), ii), vi), ix), xi), xiii), and xiv). When provided in a language other than English, authorizations issued in accordance with 1.2.2.1 shall include an English translation of the name of the State issuing the authorization, the limit of validity of the authorization and any restriction or limitation that may be established.

5.1.4 Arrangement of items
Item headings on the licence shall be uniformly numbered in roman numerals as indicated in 5.1.1, so that on any licence the number will, under any arrangement, refer to the same item heading.

Note: Item headings may be arranged in such order as may best suit the convenience of the Contracting State issuing the licence.
CHAPTER 6 – MEDICAL STANDARDS AND CERTIFICATION

Applicability

This Part prescribes the regulations governing the standards and requirements for issuing, revalidation and renewal of personnel Medical Certificates and the standards and requirements for the authorization of Medical Examiners.

Note 1: The Standards and Recommended Practices established in this chapter cannot, on their own, be sufficiently detailed to cover all possible individual situations. Of necessity, many decisions relating to the evaluation of medical fitness must be left to the judgment of the individual medical examiner. The evaluation must, therefore, be based on a medical examination conducted throughout in accordance with the highest standards of medical practice.

Note 2: Predisposing factors for disease, such as obesity and smoking, may be important for determining whether further evaluation or investigation is necessary in an individual case.

Note 3: In cases where the applicant does not fully meet the medical requirements and in complicated and unusual cases, the evaluation may have to be deferred and the case submitted to the medical assessor of DGCA for final evaluation. In such cases due regard must be given to the privileges granted by the licence applied for or held by the applicant for the Medical Assessment, and the conditions under which the licence holder is going to exercise those privileges in carrying out assigned duties.

Note 4: Attention is called to the administrative clause in 1.2.4.9 dealing with accredited medical conclusion.

Note 5: Guidance material to assist Licensing Authorities and medical examiners is published separately in the current edition of the Manual of Civil Aviation Medicine (Doc 8984). This guidance material also contains a discussion of the terms “likely” and “significant” as used in the context of the medical provisions in Chapter 6.

Note 6: Basic safety management principles, when applied to the medical assessment process, can help ensure that aeromedical resources are utilized effectively.

6.1 Medical Assessments — General

6.1.1 Classes of Medical Assessment

Three classes of Medical Assessment shall be established as follows:

a) Class 1 Medical Assessment; applies to applicants for, and holders of:
   — commercial pilot Licenses — aeroplane, airship, helicopter and powered-lift
   — airline transport pilot Licenses — aeroplane, helicopter and powered-lift
   — multi-crew pilot licences — aeroplane

b) Class 2 Medical Assessment; applies to applicants for, and holders of:
   — flight navigator licences
   — flight engineer licences
   — private pilot Licenses — aeroplane, airship, helicopter and powered-lift
   — glider pilot Licenses
   — free balloon pilot Licenses
   — cabin crew members

c) Class 3 Medical Assessment; applies to applicants for, and holders of:
   — air traffic controller Licenses.
6.1.2 The applicant for a Medical Assessment shall provide the medical examiner with a personally certified statement of medical facts concerning personal, familial and hereditary history. The applicant shall be made aware of the necessity for giving a statement that is as complete and accurate as the applicant’s knowledge permits, and any false statement shall be dealt with in accordance with 1.2.4.6.1.

6.1.3 The medical examiner shall report to the DGCA any individual case where, in the examiner’s judgment, an applicant’s failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the License being applied for, or held, is likely to jeopardize flight safety (1.2.4.9).

6.1.4 The level of medical fitness to be met for the renewal of a Medical Assessment are the same as those for the initial assessment except where otherwise specifically stated.

Note: The intervals between routine medical examinations for the purpose of renewing Medical Assessments are specified 1.2.5.2.

6.2 Requirements for Medical Assessments

6.2.1 General

An applicant for a Medical Assessment issued in accordance with the terms of 1.2.4.1 shall undergo a medical examination based on the following requirements:

a) physical and mental;

b) visual and colour perception; and

c) hearing.

6.2.2 Physical and mental requirements

An applicant for any class of Medical Assessment shall be required to be free from:

a) any abnormality, congenital or acquired; or

b) any active, latent, acute or chronic disability; or

a) any wound, injury or sequel from operation; or

d) any effect or side-effect of any prescribed or non-prescribed therapeutic medication taken; such as would entail a degree of functional incapacity which is likely to interfere with the safe operation of an aircraft or with the safe performance of duties.

Note: Use of herbal medication and alternative treatment modalities requires particular attention to possible side-effects.

6.2.3 Visual acuity test requirements

6.2.3.1 The methods in use for the measurement of visual acuity are likely to lead to differing evaluations. To achieve uniformity, therefore, Medical Examiner shall ensure that equivalence in the methods of evaluation shall be obtained.

6.2.3.2 The following shall be adopted for tests of visual acuity:

a) Visual acuity tests shall be conducted in an environment with a level of illumination that corresponds to ordinary office illumination (30-60 cd/m²).

b) Visual acuity should be measured by means of a series of Landolt rings or similar optotypes, placed at a distance from the applicant appropriate to the method of testing adopted.
6.2.4 Colour perception requirements

6.2.4.1 Medical Assessment shall use such methods of examination as will guarantee reliable testing of colour perception.

6.2.4.2 The applicant shall be required to demonstrate the ability to perceive readily those colours the perception of which is necessary for the safe performance of duties.

6.2.4.3 The applicant shall be tested for the ability to correctly identify a series of pseudoisochromatic plates in daylight or in artificial light of the same colour temperature such as that provided by CIE standard illuminants C or D65 as specified by the International Commission on Illumination (CIE).

6.2.4.4 An applicant obtaining a satisfactory result as prescribed by the Licensing Authority shall be assessed as fit. An applicant failing to obtain a satisfactory result in such a test shall be assessed as unfit unless able to readily distinguish the colours used in air navigation and correctly identify aviation coloured lights. Applicants who fail to meet these criteria shall be assessed as unfit except for Class 2 assessment with the following restriction: valid daytime only.

Note: Guidance on suitable methods of assessing colour vision is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.2.4.4.1 Sunglasses worn during the exercise of the privileges of the License or rating held should be non-polarizing and of a neutral grey tint.

6.2.5 Hearing test requirements

6.2.5.1 AME shall use such methods of examination as will guarantee reliable testing of hearing.

6.2.5.2 Applicants shall be required to demonstrate a hearing performance sufficient for the safe exercise of their licence and rating privileges.

6.2.5.3 Applicants for Class 1 Medical Assessments shall be tested by pure-tone audiometry at first issue of the assessment, not less than once every five years up to the age of 40 years, and thereafter not less than once every two years.

6.2.5.3.1 Alternatively, other methods providing equivalent results may be used.

6.2.5.4 Applicants for Class 3 Medical Assessments shall be tested by pure-tone audiometry at first issue of the assessment, not less than once every four years up to the age of 40 years, and thereafter not less than once every two years.

6.2.5.4.1 Alternatively, other methods providing equivalent results may be used.

6.2.5.5 Applicants for Class 2 Medical Assessment should be tested by pure-tone audiometry at first issue of the assessment and, after the age of 50 years, not less than once every two years.

6.2.5.6 At medical examinations, other than those mentioned in 6.2.5.3, 6.2.5.4 and 6.2.5.5, where audiometry is not performed, applicants shall be tested in a quiet room by whispered and spoken voice tests.

Note1: The reference zero for calibration of pure-tone audiometers is that of the pertinent Standards of the current edition of the Audiometric Test Methods, published by the International Organization for Standardization (ISO).

Note2: For the purpose of testing hearing in accordance with the requirements, a quiet room is a room in which the intensity of the background noise is less than 35dBA.
6.3 Class 1 Medical Assessment

6.3.1 Assessment issue and renewal

6.3.1.1 An applicant for a commercial pilot licence — aeroplane, airship, helicopter or powered-lift, a multi-crew pilot licence — aeroplane, or an airline transport pilot licence — aeroplane, helicopter or powered-lift shall undergo an initial medical examination for the issue of a Class 1 Medical Assessment.

6.3.1.2 Except where otherwise stated in this section, holders of commercial pilot licences — aeroplane, airship, helicopter or powered-lift, multi-crew pilot licences — aeroplane, or airline transport pilot licences — aeroplane, helicopter or powered-lift shall have their Class 1 Medical Assessments renewed at intervals not exceeding those specified in 1.2.5.2.

6.3.1.3 When DGCA is satisfied that the requirements of this section and the general provisions of 6.1 and 6.2 have been met, a Class 1 Medical Assessment shall be issued to the applicant.

6.3.2 Physical and mental requirements

6.3.2.1 The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable either to operate an aircraft safely or to perform assigned duties safely.

6.3.2.2 The applicant shall have no established medical history or clinical diagnosis of:

a) an organic mental disorder;

b) a mental or behavioural disorder due to use of psychoactive substances; this includes dependence syndrome induced by alcohol or other psychoactive substances;

c) schizophrenia or a schizotypal or delusional disorder;

d) a mood (affective) disorder;

e) a neurotic, stress-related or somatoform disorder;

f) a behavioural syndrome associated with physiological disturbances or physical factors;

g) a disorder of adult personality or behaviour, particularly if manifested by repeated overt acts;

h) mental retardation;

i) a disorder of psychological development;

j) a behavioural or emotional disorder, with onset in childhood or adolescence; or

k) a mental disorder not otherwise specified;

such as might render the applicant unable to safely exercise the privileges of the licence applied for or held.
6.3.2.2.1 An applicant with depression, being treated with antidepressant medication, should be assessed as unfit unless the medical assessor, having access to the details of the case concerned, considers the applicant's condition as unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.

**Note1:** Guidance on assessment of applicants treated with antidepressant medication is contained in the Manual of Civil Aviation Medicine (Doc 8984).

**Note2:** Mental and behavioural disorders are defined in accordance with the clinical descriptions and diagnostic guidelines of the World Health Organization as given in the International Statistical Classification of Diseases and Related Behavioural Disorders, WHO 1992. This document contains detailed descriptions of the diagnostic requirements, which may be useful for their application to medical assessment.

6.3.2.3 The applicant shall have no established medical history or clinical diagnosis of any of the following:

a) a progressive or non-progressive disease of the nervous system, the effects of which are likely to interfere with the safe exercise of the applicant's licence and rating privileges;

b) epilepsy; or

c) any disturbance of consciousness without satisfactory medical explanation of cause.

6.3.2.4 The applicant shall not have suffered any head injury, the effects of which are likely to interfere with the safe exercise of the applicant’s licence and rating privileges.

6.3.2.5 The applicant shall not possess any abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of the applicant’s licence and rating privileges.

6.3.2.5.1 An applicant who has undergone coronary bypass grafting or angioplasty (with or without stenting) or other cardiac intervention or who has a history of myocardial infarction or who suffers from any other potentially incapacitating cardiac condition shall be assessed as unfit unless the applicant’s cardiac condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant’s licence or rating privileges.

6.3.2.5.2 An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant’s licence or rating privileges.

**Note:** Guidance on cardiovascular evaluation is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.3.2.6 Electrocardiography shall form part of the heart examination for the first issue of a Medical Assessment.

6.3.2.6.1 Electrocardiography shall be included in reexaminations of applicants over the age of 50 no less frequently than annually.

6.3.2.6.2 Electrocardiography should be included in re-examinations of applicants between the ages of 30 and 50 no less frequently than every two years.

**Note1:** The purpose of routine electrocardiography is case finding. It does not provide sufficient evidence to justify disqualification without further thorough cardiovascular investigation.

**Note2:** Guidance on resting and exercise electrocardiography is contained in the Manual of Civil Aviation Medicine (Doc 8984).
6.3.2.7 The systolic and diastolic blood pressures shall be within normal limits.

6.3.2.7.1 The use of drugs for control of high blood pressure shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

*Note:* Guidance on the subject is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.3.2.8 There shall be no significant functional nor structural abnormality of the circulatory system.

6.3.2.9 There shall be no acute disability of the lungs nor any active disease of the structures of the lungs, mediastinum or pleurae likely to result in incapacitating symptoms during normal or emergency operations.

6.3.2.9.1 Chest radiography shall form part of the initial examination.

*Note:* Periodic chest radiography is usually not necessary but may be a necessity in situations where asymptomatic pulmonary disease can be expected.

6.3.2.10 Applicants with chronic obstructive pulmonary disease shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

6.3.2.11 Applicants with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit.

6.3.2.11.1 The use of drugs for control of asthma shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

*Note:* Guidance on hazards of medication and drugs is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.3.2.12 Applicants with active pulmonary tuberculosis shall be assessed as unfit.

6.3.2.12.1 Applicants with quiescent or healed lesions which are known to be tuberculosis, or are presumably tuberculosis in origin, may be assessed as fit.

*Note 1:* Guidance on assessment of respiratory diseases is contained in the Manual of Civil Aviation Medicine (Doc 8984).

*Note 2:* Guidance on hazards of medications and drugs is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.3.2.13 Applicants with significant impairment of function of the gastrointestinal tract or its adnexa shall be assessed as unfit.

6.3.2.13.1 Applicants shall be completely free from those hernias that might give rise to incapacitating symptoms.

6.3.2.14 Applicants with sequelae of disease of, or surgical intervention on, any part of the digestive tract or its adnexa, likely to cause incapacitation in flight, in particular any obstruction due to stricture or compression, shall be assessed as unfit.

6.3.2.14.1 An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexa with a total or partial excision or a diversion of any of these organs should be assessed as unfit until such time as the medical assessor, having access to the details of the operation concerned, considers that the effects of the operation are not likely to cause incapacitation in flight.
6.3.2.15 Applicants with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit.

6.3.2.16 Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.

Note: Guidance on assessment of Type 2 insulin-treated diabetic applicants under the provisions of 1.2.4.9 is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.3.2.16.1 Applicants with non-insulin-treated diabetes mellitus shall be assessed as unfit unless the condition is shown to be satisfactorily controlled by diet alone or by diet combined with oral anti-diabetic medication, the use of which is compatible with the safe exercise of the applicant’s licence and rating privileges.

Note: Guidance on assessment of diabetic applicants is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.3.2.17 Applicants with diseases of the blood and/or the lymphatic system shall be assessed as unfit unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their licence and rating privileges.

Note: Sickle cell trait or other haemoglobinopathic traits are usually compatible with a fit assessment.

6.3.2.18 Applicants with renal or genitourinary disease shall be assessed as unfit, unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their licence and rating privileges.

6.3.2.18.1 Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

Note: Guidance on urine examination and evaluation of abnormalities is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.3.2.19 Applicants with sequelae of disease of or surgical procedures on the kidneys or the genito-urinary tract, in particular obstructions due to stricture or compression, shall be assessed as unfit unless the applicant’s condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant’s licence or rating privileges.

6.3.2.19.1 Applicants who have undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.

6.3.2.20 Applicants who are seropositive for Human Immunodeficiency Virus (HIV) shall be assessed as unfit. (Civil Service Commission order 9/93 and Civil Service Law Chapter 1.5 for 04/04/1979 )

6.3.2.21 Applicants who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.

6.3.2.21.1 For applicants with a low-risk uncomplicated pregnancy, evaluated and supervised in accordance with 6.3.2.21, the fit assessment should be limited to the period from the end of the 12th week until the end of the 26th week of gestation.

6.3.2.22 Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her licence until she has undergone re-evaluation in accordance with best medical practice and it has been determined that she is able to safely exercise the privileges of her licence and ratings.
6.3.2.23 The applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

*Note:* Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.

6.3.2.24 The applicant shall not possess any abnormality or disease of the ear or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

6.3.2.25 There shall be:

a) no disturbance of vestibular function;

b) no significant dysfunction of the Eustachian tubes; and

c) no unhealed perforation of the tympanic membranes.

6.3.2.25.1 A single dry perforation of the tympanic membrane need not render the applicant unfit.

*Note:* Guidance on testing of the vestibular function is contained in Manual of Civil Aviation Medicine (Doc 8984).

6.3.2.26 There shall be:

a) no nasal obstruction; and

b) no malformation nor any disease of the buccal cavity or upper respiratory tract which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

6.3.2.27 Applicants with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

6.3.3 Visual requirements

The medical examination shall be based on the following requirements.

6.3.3.1 The function of the eyes and their adnexa shall be normal. There shall be no active pathological condition, acute or chronic, nor any sequelae of surgery or trauma of the eyes or their adnexa likely to reduce proper visual function to an extent that would interfere with the safe exercise of the applicant's licence and rating privileges.

6.3.3.2 Distant visual acuity with or without correction shall be 6/9 or better in each eye separately, and binocular visual acuity shall be 6/6 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that:

a) such correcting lenses are worn during the exercise of the privileges of the licence or rating applied for or held; and

b) in addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant's licence.

*Note 1:* 6.3.3.2 b) is the subject of Standards in KCASR's Part 6, Subpart 1.

*Note 2:* An applicant accepted as meeting these provisions is deemed to continue to do so unless there is reason to suspect otherwise, in which case an ophthalmic report is required at the discretion of DGCA. Both uncorrected and corrected visual acuity are normally measured and recorded at each re-examination. Conditions which indicate a need to obtain an ophthalmic report include: a substantial decrease in the uncorrected visual acuity, any decrease in best corrected visual acuity, and the occurrence of eye disease, eye injury or eye surgery.
6.3.3.2.1 Applicants may use contact lenses to meet this requirement provided that:
   a) the lenses are monofocal and non-tinted;
   b) the lenses are well tolerated; and
   c) a pair of suitable correcting spectacles is kept readily available during the exercise of the licence privileges.

   Note: Applicants who use contact lenses may not need to have their uncorrected visual acuity measured at each reexamination provided the history of their contact lens prescription is known.

6.3.3.2.2 Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

   Note: If spectacles are used, high-index lenses are needed to minimize peripheral field distortion.

6.3.3.2.3 Applicants whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be required to provide a full ophthalmic report prior to initial Medical Assessment and every five years thereafter.

   Note1: The purpose of the required ophthalmic examination is (1) to ascertain normal visual performance, and (2) to identify any significant pathology.

   Note2: Guidance on the assessment of monocular applicants under the provisions of 1.2.4.9 is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.3.3.3 Applicants who have undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless they are free from those sequelae which are likely to interfere with the safe exercise of their licence and rating privileges.

6.3.3.4 The applicant shall have the ability to read, while wearing the correcting lenses, if any, required by 6.3.3.2, the N5 chart or its equivalent at a distance selected by that applicant in the range of 30 to 50 cm and the ability to read the N14 chart or its equivalent at a distance of 100 cm. If this requirement is met only by the use of near correction, the applicant may be assessed as fit provided that this near correction is added to the spectacle correction already prescribed in accordance with 6.3.3.2; if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the licence. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

   Note1: N5 and N14 refer to the size of typeface used. For further details, see the Manual of Civil Aviation Medicine (Doc 8984).

   Note2: An applicant who needs near correction to meet this requirement will require “look-over”, bifocal or perhaps multifocal lenses in order to read the instruments and a chart or manual held in the hand, and also to make use of distant vision, through the windscreen, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) significantly reduces distant visual acuity and is therefore not acceptable.

   Note3: Whenever there is a requirement to obtain or renew correcting lenses, an applicant is expected to advise the refractorist of reading distances for the visual flight deck tasks relevant to the types of aircraft in which the applicant is likely to function.

6.3.3.4.1 When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.

6.3.3.5 The applicant shall be required to have normal fields of vision.

6.3.3.6 The applicant shall be required to have normal binocular function.
6.3.3.6.1 Reduced stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia need not be disqualifying.

6.3.4 Hearing requirements

6.3.4.1 The applicant, when tested on a pure-tone audiometer, shall not have a hearing loss, in either ear separately, of more than 35 dB at any of the frequencies 500, 1000 or 2000 Hz, or more than 50 dB at 3000 Hz.

6.3.4.1.1 An applicant with a hearing loss greater than the above may be declared fit provided that the applicant has normal hearing performance against a background noise that reproduces or simulates the masking properties of flight deck noise upon speech and beacon signals.

**Note1:** It is important that the background noise be representative of the noise in the cockpit of the type of aircraft for which the applicant’s licence and ratings are valid.

**Note2:** In the speech material for discrimination testing, both aviation-relevant phrases and phonetically balanced words are normally used.

6.3.4.1.2 Alternatively, a practical hearing test conducted in flight in the cockpit of an aircraft of the type for which the applicant’s licence and ratings are valid may be used.

6.4 Class 2 Medical Assessment

6.4.1 Assessment issue and renewal

6.4.1.1 An applicant for a private pilot licence — aeroplane, airship, helicopter or powered-lift, a glider pilot licence, a free balloon pilot licence, a flight engineer licence or a flight navigator licence shall undergo an initial medical examination for the issue of a Class 2 Medical Assessment.

6.4.1.2 Except where otherwise stated in this section, holders of private pilot licences — aeroplane, airship, helicopter or powered-lift, glider pilot licences, free balloon pilot licences, flight engineer licences or flight navigator licences shall have their Class 2 Medical Assessments renewed at intervals not exceeding those specified in 1.2.5.2.

6.4.1.3 When DGCA is satisfied that the requirements of this section and the general provisions of 6.1 and 6.2 have been met, a Class 2 Medical Assessment shall be issued to the applicant.

6.4.2 Physical and mental requirements

The medical examination shall be based on the following requirements.

6.4.2.1 The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable either to operate an aircraft safely or to perform assigned duties safely.

6.4.2.2 The applicant shall have no established medical history or clinical diagnosis of:

a) an organic mental disorder;

b) a mental or behavioural disorder due to psychoactive substance use; this includes dependence syndrome induced by alcohol or other psychoactive substances;

c) schizophrenia or a schizotypal or delusional disorder;

d) a mood (affective) disorder;

e) a neurotic, stress-related or somatoform disorder;
f) a behavioural syndrome associated with physiological disturbances or physical factors;
g) a disorder of adult personality or behaviour, particularly if manifested by repeated overt acts;
h) mental retardation;
i) a disorder of psychological development;
j) a behavioural or emotional disorder, with onset in childhood or adolescence; or
k) a mental disorder not otherwise specified; such as might render the applicant unable to safely exercise the privileges of the licence applied for or held.

6.4.2.2.1 An applicant with depression, being treated with antidepressant medication, should be assessed as unfit unless the medical assessor, having access to the details of the case concerned, considers the applicant's condition as unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.

**Note 1:** Guidance on assessment of applicants treated with antidepressant medication is contained in the Manual of Civil Aviation Medicine (Doc 8984).

**Note 2:** Mental and behavioural disorders are defined in accordance with the clinical descriptions and diagnostic guidelines of the World Health Organization as given in the International Statistical Classification of Diseases and Related Health Problems, 10th Edition — Classification of Mental and Behavioural Disorders, WHO 1992. This document contains detailed descriptions of the diagnostic requirements, which may be useful for their application to medical assessment.

6.4.2.3 The applicant shall have no established medical history or clinical diagnosis of any of the following:

a) a progressive or non-progressive disease of the nervous system, the effects of which are likely to interfere with the safe exercise of the applicant's licence and rating privileges;
b) epilepsy;
c) any disturbance of consciousness without satisfactory medical explanation of cause.

6.4.2.4 The applicant shall not have suffered any head injury, the effects of which are likely to interfere with the safe exercise of the applicant's licence and rating privileges.

6.4.2.5 The applicant shall not possess any abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

6.4.2.5.1 An applicant who has undergone coronary by-pass grafting or angioplasty (with or without stenting) or other cardiac intervention or who has a history of myocardial infarction or who suffers from any other potentially incapacitating cardiac condition shall be assessed as unfit unless the applicant's cardiac condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

6.4.2.5.2 An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

**Note:** Guidance on cardiovascular evaluation is contained in the Manual of Civil Aviation Medicine (Doc 8984).
6.4.2.6 Electrocardiography shall form part of the heart examination for the first issue of a Medical Assessment after the age of 40.

6.4.2.6.1 Electrocardiography shall be included in re-examinations of applicants after the age of 50 no less than every two years.

6.4.2.6.2 Electrocardiography should form part of the heart examination for the first issue of a Medical Assessment.

Note1: The purpose of routine electrocardiography is case finding. It does not provide sufficient evidence to justify disqualification without further thorough cardiovascular investigation.

Note2: Guidance on resting and exercise electrocardiography is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.4.2.7 The systolic and diastolic blood pressures shall be within normal limits.

6.4.2.7.1 The use of drugs for control of high blood pressure shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

Note: Guidance on the subject is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.4.2.8 There shall be no significant functional nor structural abnormality of the circulatory system.

6.4.2.9 There shall be no disability of the lungs nor any active disease of the structures of the lungs, mediastinum or pleura likely to result in incapacitating symptoms during normal or emergency operations.

6.4.2.9.1 Chest radiography should form part of the initial and periodic examinations in cases where asymptomatic pulmonary disease can be expected.

6.4.2.10 Applicants with chronic obstructive pulmonary disease shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

6.4.2.11 Applicants with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit.

6.4.2.11.1 The use of drugs for control of asthma shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.

Note: Guidance on hazards of medication and drugs is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.4.2.12 Applicants with active pulmonary tuberculosis shall be assessed as unfit.

6.4.2.12.1 Applicants with quiescent or healed lesions, known to be tuberculosis or presumably tuberculosis in origin, may be assessed as fit.


Note2: Guidance on hazards of medication and drugs is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.4.2.13 Applicants shall be completely free from those hernias that might give rise to incapacitating symptoms.

6.4.2.13.1 Applicants with significant impairment of the function of the gastrointestinal tract or its adnexa shall be assessed as unfit.
6.4.2.14 Applicants with sequelae of disease of or surgical intervention on any part of the digestive tract or its adnexa, likely to cause incapacitation in flight, in particular any obstruction due to stricture or compression, shall be assessed as unfit.

6.4.2.14.1 An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexa with a total or partial excision or a diversion of any of these organs should be assessed as unfit until such time as the medical assessor, having access to the details of the operation concerned, considers that the effects of the operation are not likely to cause incapacitation in flight.

6.4.2.15 Applicants with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit.

6.4.2.16 Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.

Note: Guidance on assessment of Type 2 insulin-treated diabetic applicants under the provisions of 1.2.4.9 is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.4.2.16.1 Applicants with non-insulin-treated diabetes mellitus shall be assessed as unfit unless the condition is shown to be satisfactorily controlled by diet alone or by diet combined with oral anti-diabetic medication, the use of which is compatible with the safe exercise of the applicant’s licence and rating privileges.

Note: Guidance on assessment of diabetic applicants is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.4.2.17 Applicants with diseases of the blood and/or the lymphatic system shall be assessed as unfit unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their licence and rating privileges.

Note: Sickle cell trait and other haemoglobinopathic traits are usually compatible with fit assessment.

6.4.2.18 Applicants with renal or genito-urinary disease shall be assessed as unfit unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their licence and rating privileges.

6.4.2.18.1 Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

Note: Guidance on urine examination and evaluation of abnormalities is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.4.2.19 Applicants with sequelae of disease of, or surgical procedures on, the kidneys or the genito-urinary tract, in particular obstructions due to stricture or compression, shall be assessed as unfit unless the applicant’s condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant’s licence or rating privileges.

6.4.2.19.1 Applicants who have undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.

6.4.2.20 Applicants who are seropositive for Human Immunodeficiency Virus (HIV) shall be assessed as unfit (Civil Service Commission order 9/93 and Civil Service Law Chapter 1.5 for 04/04/1979).
6.4.2.21 Applicants who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.

6.4.2.21.1 For applicants with a low-risk uncomplicated pregnancy, evaluated and supervised in accordance with 6.4.2.21, the fit assessment should be limited to the period from the end of the 12th week until the end of the 26th week of gestation.

6.4.2.22 Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her licence until she has undergone re-evaluation in accordance with best medical practice and it has been determined that she is able to safely exercise the privileges of her licence and ratings.

6.4.2.23 The applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

   Note: Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.

6.4.2.24 The applicant shall not possess any abnormality or disease of the ear or related structures which is likely to interfere with the safe exercise of the applicant’s licence and rating privileges.

6.4.2.25 There shall be:

   a) no disturbance of the vestibular function;

   b) no significant dysfunction of the Eustachian tubes; and

   c) no unhealed perforation of the tympanic membranes.

6.4.2.25.1 A single dry perforation of the tympanic membrane need not render the applicant unfit.

   Note: Guidance on testing of the vestibular function is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.4.2.26 There shall be:

   a) no nasal obstruction; and

   b) no malformation nor any disease of the buccal cavity or upper respiratory tract; which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

6.4.2.27 Applicants with stuttering and other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

6.4.3 Visual requirements

   The medical examination shall be based on the following requirements.

6.4.3.1 The function of the eyes and their adnexa shall be normal. There shall be no active pathological condition, acute or chronic, nor any sequelae of surgery or trauma of the eyes or their adnexa likely to reduce proper visual function to an extent that would interfere with the safe exercise of the applicant’s licence and rating privileges.
6.4.3.2 Distant visual acuity with or without correction shall be 6/12 or better in each eye separately, and binocular visual acuity shall be 6/9 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that:

a) such correcting lenses are worn during the exercise of the privileges of the licence or rating applied for or held; and

b) in addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant’s licence.

*Note:* An applicant accepted as meeting these provisions is deemed to continue to do so unless there is reason to suspect otherwise, in which case an ophthalmic report is required at the discretion of the DGCA. Both uncorrected and corrected visual acuity are normally measured and recorded at each re-examination. Conditions which indicate a need to obtain an ophthalmic report include: a substantial decrease in the uncorrected visual acuity, any decrease in best corrected visual acuity, and the occurrence of eye disease, eye injury or eye surgery.

6.4.3.2.1 Applicants may use contact lenses to meet this requirement provided that:

a) the lenses are monofocal and non-tinted;

b) the lenses are well tolerated; and

c) a pair of suitable correcting spectacles is kept readily available during the exercise of the licence privileges.

*Note:* Applicants who use contact lenses may not need to have their uncorrected visual acuity measured at each re-examination provided the history of their contact lens prescription is known.

6.4.3.2.2 Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

*Note:* If spectacles are used, high-index lenses are needed to minimize peripheral field distortion.

6.4.3.2.3 Applicants whose uncorrected distant visual acuity in either eye is worse than 6/60 should be required to provide a full ophthalmic report prior to initial Medical Assessment and every five years thereafter.

*Note1:* The purpose of the required ophthalmic examination is (1) to ascertain normal visual performance, and (2) to identify any significant pathology.

*Note2:* Guidance on the assessment of monocular applicants under the provisions of 1.2.4.9 is contained in the *Manual of Civil Aviation Medicine* (Doc 8984).

6.4.3.3 Applicants who have undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless they are free from those sequelae which are likely to interfere with the safe exercise of their licence and rating privileges.

6.4.3.4 The applicant shall have the ability to read, while wearing the correcting lenses, if any, required by 6.4.3.2, the N5 chart or its equivalent at a distance selected by that applicant in the range of 30 to 50 cm. If this requirement is met only by the use of near correction, the applicant may be assessed as fit provided that this near correction is added to the spectacle correction already prescribed in accordance with 6.4.3.2; if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the licence. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.
Note 1: N5 refers to the size of typeface used. For further details, see the Manual of Civil Aviation Medicine (Doc 8984).

Note 2: An applicant who needs near correction to meet the requirement will require “look-over”, bifocal or perhaps multifocal lenses in order to read the instruments and a chart or manual held in the hand, and also to make use of distant vision, through the windscreen, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) significantly reduces distant visual acuity and is therefore not acceptable.

Note 3: Whenever there is a requirement to obtain or renew correcting lenses, an applicant is expected to advise the refractionist of the reading distances for the visual flight deck tasks relevant to the types of aircraft in which the applicant is likely to function.

6.4.3.4.1 When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.

6.4.3.5 The applicant shall be required to have normal fields of vision.

6.4.3.6 The applicant shall be required to have normal binocular function.

6.4.3.6.1 Reduced stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia need not be disqualifying.

6.4.4 Hearing requirements

Note: Attention is called to 2.7.1.3.1 on requirements for the issue of instrument rating to applicants who hold a private pilot licence.

6.4.4.1 Applicants who are unable to hear an average conversational voice in a quiet room, using both ears, at a distance of 2 m from the examiner and with the back turned to the examiner, shall be assessed as unfit.

6.4.4.2 When tested by pure-tone audiometry, an applicant with a hearing loss, in either ear separately, of more than 35 dB at any of the frequencies 500, 1000 or 2000 Hz, or more than 50 dB at 3000 Hz, shall be assessed as unfit.

6.4.4.3 An applicant who does not meet the requirements in 6.4.4.1 or 6.4.4.2 should undergo further testing in accordance with 6.3.4.1.1.

6.5 Class 3 Medical Assessment

6.5.1 Assessment issue and renewal

6.5.1.1 An applicant for an air traffic controller licence shall undergo an initial medical examination for the issue of a Class 3 Medical Assessment.

6.5.1.2 Except where otherwise stated in this section, holders of air traffic controller licences shall have their Class 3 Medical Assessments renewed at intervals not exceeding those specified in 1.2.5.2.

6.5.1.3 When the Licensing Authority is satisfied that the requirements of this section and the general provisions of 6.1 and 6.2 have been met, a Class 3 Medical Assessment shall be issued to the applicant.

6.5.2 Physical and mental requirements

6.5.2.1 The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable to perform duties safely.

6.5.2.2 The applicant shall have no established medical history or clinical diagnosis of:

a) an organic mental disorder;
b) a mental or behavioural disorder due to psychoactive substance use; this includes dependence syndrome induced by alcohol or other psychoactive substances;

c) schizophrenia or a schizotypal or delusional disorder;

d) a mood (affective) disorder;

e) a neurotic, stress-related or somatoform disorder;

f) a behavioural syndrome associated with physiological disturbances or physical factors;

g) a disorder of adult personality or behaviour, particularly if manifested by repeated overt acts;

h) mental retardation;

i) a disorder of psychological development;

j) a behavioural or emotional disorder, with onset in childhood or adolescence; or

k) a mental disorder not otherwise specified; such as might render the applicant unable to safely exercise the privileges of the licence applied for or held.

6.5.2.2.1 An applicant with depression, being treated with antidepressant medication, should be assessed as unfit unless the medical assessor, having access to the details of the case concerned, considers the applicant’s condition as unlikely to interfere with the safe exercise of the applicant’s licence and rating privileges.

Note1: Guidance on assessment of applicants treated with antidepressant medication is contained in the Manual of Civil Aviation Medicine (Doc 8984).

Note2: Mental and behavioural disorders are defined in accordance with the clinical descriptions and diagnostic guidelines of the World Health Organization as given in the International Statistical Classification of Diseases and Related Health Problems, 10th Edition — Classification of Mental and Behavioural Disorders, WHO 1992. This document contains detailed descriptions of the diagnostic requirements which may be useful for their application to medical assessment.

6.5.2.3 The applicant shall have no established medical history or clinical diagnosis of any of the following:

a) a progressive or non-progressive disease of the nervous system, the effects of which are likely to interfere with the safe exercise of the applicant’s licence and rating privileges;

b) epilepsy; or

c) any disturbance of consciousness without satisfactory medical explanation of cause.

6.5.2.4 The applicant shall not have suffered any head injury, the effects of which are likely to interfere with the safe exercise of the applicant’s licence and rating privileges.

6.5.2.5 The applicant shall not possess any abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of the applicant’s licence and rating privileges.
6.5.2.5.1 An applicant who has undergone coronary bypass grafting or angioplasty (with or without stenting) or other cardiac intervention or who has a history of myocardial infarction or who suffers from any other potentially incapacitating cardiac condition shall be assessed as unfit unless the applicant’s cardiac condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant’s licence and rating privileges.

6.5.2.5.2 An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant’s licence and rating privileges.

Note: Guidance on cardiovascular evaluation is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.5.2.6 Electrocardiography shall form part of the heart examination for the first issue of a Medical Assessment.

6.5.2.6.1 Electrocardiography shall be included in re-examinations of applicants after the age of 50 no less frequently than every two years.

Note1: The purpose of routine electrocardiography is case finding. It does not provide sufficient evidence to justify disqualification without further thorough cardiovascular investigation.

Note2: Guidance on resting and exercise electrocardiography is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.5.2.7 The systolic and diastolic blood pressures shall be within normal limits.

6.5.2.7.1 The use of drugs for control of high blood pressure is disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant’s licence privileges.

Note: Guidance on this subject is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.5.2.8 There shall be no significant functional nor structural abnormality of the circulatory system.

6.5.2.9 There shall be no disability of the lungs nor any active disease of the structures of the lungs, mediastinum or pleurae likely to result in incapacitating symptoms.

Note: Chest radiography is usually not necessary but may be indicated in cases where asymptomatic pulmonary disease can be expected.

6.5.2.10 Applicants with chronic obstructive pulmonary disease shall be assessed as unfit unless the applicant’s condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant’s licence or rating privileges.

6.5.2.11 Applicants with asthma causing significant symptoms or likely to cause incapacitating symptoms shall be assessed as unfit.

6.5.2.11.1 The use of drugs for control of asthma shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant’s licence and rating privileges.

Note: Guidance on hazards of medications is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.5.2.12 Applicants with active pulmonary tuberculosis shall be assessed as unfit.

6.5.2.12.1 Applicants with quiescent or healed lesions, known to be tuberculosis or presumably tuberculosis in origin, may be assessed as fit.
6.5.2.13 Applicants with significant impairment of the function of the gastrointestinal tract or its adnexae shall be assessed as unfit.

6.5.2.14 Applicants with sequelae of disease of or surgical intervention on any part of the digestive tract or its adnexa, likely to cause incapacitation, in particular any obstructions due to stricture or compression, shall be assessed as unfit.

6.5.2.14.1 An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexa, with a total or partial excision or a diversion of any of these organs should be assessed as unfit until such time as the medical assessor, having access to the details of the operation concerned, considers that the effects of the operation are not likely to cause incapacitation.

6.5.2.15 Applicants with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit.

6.5.2.16 Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.

Note: Guidance on assessment of Type 2 insulin-treated diabetic applicants under the provisions of 1.2.4.9 is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.5.2.16.1 Applicants with non-insulin-treated diabetes shall be assessed as unfit unless the condition is shown to be satisfactorily controlled by diet alone or by diet combined with oral anti-diabetic medication, the use of which is compatible with the safe exercise of the applicant’s licence and rating privileges.

Note: Guidance on assessment of diabetic applicants is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.5.2.17 Applicants with diseases of the blood and/or the lymphatic system shall be assessed as unfit, unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their licence and rating privileges.

6.5.2.18 Applicants with renal or genito-urinary disease shall be assessed as unfit unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their licence and rating privileges.

6.5.2.18.1 Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

Note: Guidance on urine examination and evaluation of abnormalities is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.5.2.19 Applicants with sequelae of disease of, or surgical procedures on the kidneys or the genito-urinary tract, in particular obstructions due to stricture or compression, shall be assessed as unfit unless the applicant’s condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant’s licence or rating privileges.

6.5.2.19.1 Applicants who have undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.
6.5.2.20 Applicants who are seropositive for Human Immunodeficiency Virus (HIV) shall be assessed as unfit (Civil Service Commission order 9/93 and Civil Service Law Chapter 1.5 for 04/04/1979).

6.5.2.21 Applicants who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.

6.5.2.21.1 During the gestational period, precautions should be taken for the timely relief of an air traffic controller in the event of early onset of labour or other complications.

6.5.2.21.2 For applicants with a low-risk uncomplicated pregnancy, evaluated and supervised in accordance with 6.5.2.21, the fit assessment should be limited to the period until the end of the 34th week of gestation.

6.5.2.22 Following confinement or termination of pregnancy the applicant shall not be permitted to exercise the privileges of her licence until she has undergone re-evaluation in accordance with best medical practice and it has been determined that she is able to safely exercise the privileges of her licence and ratings.

6.5.2.23 The applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

Note: Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.

6.5.2.24 The applicant shall not possess any abnormality or disease of the ear or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

6.5.2.25 There shall be no malformation nor any disease of the nose, buccal cavity or upper respiratory tract which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

6.5.2.26 Applicants with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

6.5.3 Visual requirements

The medical examination shall be based on the following requirements.

6.5.3.1 The function of the eyes and their adnexa shall be normal. There shall be no active pathological condition, acute or chronic, nor any sequelae of surgery or trauma of the eyes or their adnexa likely to reduce proper visual function to an extent that would interfere with the safe exercise of the applicant's licence and rating privileges.

6.5.3.2 Distant visual acuity with or without correction shall be 6/9 or better in each eye separately, and binocular visual acuity shall be 6/6 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that:

a) such correcting lenses are worn during the exercise of the privileges of the licence or rating applied for or held; and

b) in addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant’s licence.
Note: An applicant accepted as meeting these provisions is deemed to continue to do so unless there is reason to suspect otherwise, in which case an ophthalmic report is required at the discretion of the Licensing Authority. Both uncorrected and corrected visual acuity are normally measured and recorded at each re-examination. Conditions which indicate a need to obtain an ophthalmic report include: a substantial decrease in the uncorrected visual acuity, any decrease in best corrected visual acuity, and the occurrence of eye disease, eye injury or eye surgery.

6.5.3.2.1 Applicants may use contact lenses to meet this requirement provided that:

a) the lenses are monofocal and non-tinted;

b) the lenses are well tolerated; and

c) a pair of suitable correcting spectacles is kept readily available during the exercise of the licence privileges.

Note: Applicants who use contact lenses may not need to have their uncorrected visual acuity measured at each reexamination provided the history of their contact lens prescription is known.

6.5.3.2.2 Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

Note: If spectacles are used, high-index lenses are needed to minimize peripheral field distortion.

6.5.3.2.3 Applicants whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be required to provide a full ophthalmic report prior to initial Medical Assessment and every five years thereafter.

Note1: The purpose of the required ophthalmic examination is (1) to ascertain normal vision performance, and (2) to identify any significant pathology.

Note2: Guidance on the assessment of monocular applicants under the provisions of 1.2.4.9 is contained in the Manual of Civil Aviation Medicine (Doc 8984).

6.5.3.3 Applicants who have undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless they are free from those sequelae which are likely to interfere with the safe exercise of their licence and rating privileges.

6.5.3.4 The applicant shall have the ability to read, while wearing the correcting lenses, if any, required by 6.5.3.2, the N5 chart or its equivalent at a distance selected by that applicant in the range of 30 to 50 cm and the ability to read the N14 chart or its equivalent at a distance of 100 cm. If this requirement is met only by the use of near correction, the applicant may be assessed as fit provided that this near correction is added to the spectacle correction already prescribed in accordance with 6.5.3.2; if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the licence. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

Note1: N5 and N14 refer to the size of typeface used. For further details, see the Manual of Civil Aviation Medicine (Doc 8984).

Note2: An applicant who needs near correction to meet the requirement will require “look-over”, bifocal or perhaps multi-focal lenses in order to read radar screens, visual displays and written or printed material and also to make use of distant vision, through the windows, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) may be acceptable for certain air traffic control duties. However, it should be realized that single-vision near correction significantly reduces distant visual acuity.
Note3: Whenever there is a requirement to obtain or renew correcting lenses, an applicant is expected to advise the refractionist of reading distances for the air traffic control duties the applicant is likely to perform.

6.5.3.4.1 When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.

6.5.3.5 The applicant shall be required to have normal fields of vision.

6.5.3.6 The applicant shall be required to have normal binocular function.

6.5.3.6.1 Reduced stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia need not be disqualifying.

6.5.4 Hearing requirements

6.5.4.1 The applicant, when tested on a pure-tone audiometer shall not have a hearing loss, in either ear separately, of more than 35 dB at any of the frequencies 500, 1000 or 2000 Hz, or more than 50 dB at 3000 Hz.

6.5.4.1.1 An applicant with a hearing loss greater than the above may be declared fit provided that the applicant has normal hearing performance against a background noise that reproduces or simulates that experienced in a typical air traffic control working environment.

Note1: The frequency composition of the background noise is defined only to the extent that the frequency range 600 to 4800 Hz (speech frequency range) is adequately represented.

Note2: In the speech material for discrimination testing, both aviation-relevant phrases and phonetically balanced words are normally used.

6.5.4.1.2 Alternatively, a practical hearing test conducted in an air traffic control environment representative of the one for which the applicant’s licence and ratings are valid may be used.

6.6 Authorized Medical Examiner (AME)

1) Kuwait DGCA shall designate and authorize as Medical Examiners (AME’s), who are qualified and licensed to practice medicine in Kuwait as Authorized Medical Examiner (AMEs) subject to the following qualification and experience:

a) Experience:

   i) had at least 8 years experience in the practice of medicine;

   ii) have acquired practical knowledge and experience of the conditions in which the holder of licence and certificates carry out their duties.

b) Training:

   i) Basic training of a minimum of 60 hours of lecture including practical work for physicians responsible for the medical assessment, surveillance and certification of Class 2 medical certificate.

   ii) Advanced training for at least 60 (in addition to the 60 hours basic training) hours of lectures including practical work for physicians responsible for the medical examination and assessment and surveillance of Class 1 flying personnel.
c) should have JAR designation;
d) Refresher Training

2) Medical Examiners shall have and continue to receive training in aviation medicine and shall acquire practical knowledge and experience of the conditions in which the holder of licence and certificates, carry-out their duties.

During the period of authorization an AME is required to attend a minimum of 20 hours approved refresher training in every three years.

6.7 Aviation Medical Center
Kuwait DGCA recognize any authorized/approved aviation medical center in any state of ICAO contracting members, for intensive medical check or consultation when needed by DGCA Authorized Medical Examiner, once the medical standards of that ICAO contracting state is reviewed and accepted by Kuwait DGCA – Licensing Authority.

6.8 Medical Assessors
Shall be a physician designated and authorized as medical examiners (AME) for Kuwait DGCA, qualified and licensed to practice medicine in Kuwait by Ministry of Health, in addition to the following qualification, experience and training:
a) Experience:
   i) should have at least 16 years experience in the practice of medicine, and had at least 8 years experience in the practice of Aviation Medicine, including an airline medical post.
   ii) have acquired practical knowledge and experience of the conditions in which the holder of licence and certificates carry out their duties.
   iii) should have EASA designation by UK-CAA to issue medical licensing in Kuwait.

b) Training:
   i) Basic training of a minimum of 60 hours or more of lecture including practical work for physicians responsible for the medical assessment, surveillance and certification of Class 2 medical certificate.
   ii) Advanced training for at least 60 (in addition to the 60 hours basic training) hours of lectures including practical work for physicians responsible for the medical examination and assessment and surveillance of Class 1 flying personnel.
   iii) Refresher training: Medical Assessor shall have and continue to receive training in aviation medicine during the period of authorization as an AME; he is required to attend a minimum of 20 hours approved refresher training in every three years.
APPENDIX 1 – REQUIREMENTS FOR PROFICIENCY IN LANGUAGES USED FOR RADIOTELEPHONY COMMUNICATIONS

(Chapter 1, Section 1.2.9, refers)

1. General

Note: The ICAO language proficiency requirements include the holistic descriptors at Section 2 and the ICAO Operational Level (Level 4) of the ICAO Language Proficiency Rating Scale in Attachment A. The language proficiency requirements are applicable to the use of both phraseologies and plain language.

To meet the language proficiency requirements contained in Chapter 1, Section 1.2.9, an applicant for a licence or a licence holder shall demonstrate, in a manner acceptable to the licensing authority, compliance with the holistic descriptors at Section 2 and with the ICAO Operational Level (Level 4) of the ICAO Language Proficiency Rating Scale in Attachment A.

2. Holistic Descriptors

Proficient speakers shall:

a) communicate effectively in voice-only (telephone/radiotelephone) and in face-to-face situations;

b) communicate on common, concrete and work-related topics with accuracy and clarity;

c) use appropriate communicative strategies to exchange messages and to recognize and resolve misunderstandings (e.g. to check, confirm, or clarify information) in a general or work-related context;

d) handle successfully and with relative ease the linguistic challenges presented by a complication or unexpected turn of events that occurs within the context of a routine work situation or communicative task with which they are otherwise familiar; and

e) use a dialect or accent which is intelligible to the aeronautical community.
APPENDIX 2 – APPROVED TRAINING ORGANIZATION

(Chapter 1, 1.2.8.2 refers)

1. Issue of Approval

1.1 The issuance of an approval for a training organization and the continued validity of the approval shall depend upon the training organization being in compliance with the requirements of this Appendix.

1.2 The approval document shall contain at least the following:-

   a) organization’s name and location;
   b) date of issue and period of validity (where appropriate);
   c) terms of approval.

2. Training and procedures manual

2.1 The training organization shall provide a training and procedures manual for the use and guidance of personnel concerned. This manual may be issued in separate parts and shall contain at least the following information:

   a) a general description of the scope of training authorized under the organization’s terms of approval;
   b) the content of the training programmes offered including the courseware and equipment to be used;
   c) a description of the organization’s quality assurance system in accordance with 5;
   d) a description of the organization’s facilities;
   e) the name, duties and qualification of the person designated as responsible for compliance with the requirements of the approval in 7.1;
   f) a description of the duties and qualification of the personnel designated as responsible for planning, performing and supervising the training in 7.2;
   g) a description of the procedures used to establish and maintain the competence of instructional personnel as required by 7.3;
   h) a description of the method used for the completion and retention of the training records required by 8;
   i) a description, when applicable, of additional training needed to comply with an operator’s procedures and requirements; and
   j) when Kuwait DGCA has authorized an approved training organization to conduct the testing required for the issuance of a licence or rating in accordance with 10, a description of the selection, role and duties of the authorized personnel, as well as the applicable requirements established by the Licensing Authority.

2.2 The training organization shall ensure that the training and procedures manual is amended as necessary to keep the information contained therein up to date.

2.3 Copies of all amendments to the training and procedures manual shall be furnished promptly to all organizations or persons to whom the manual has been issued.
3. **Training Programmes**

3.1 Kuwait DGCA may approve a training programme for a private pilot licence, commercial pilot licence, an instrument rating or an aircraft maintenance (technician/engineer/mechanic) licence that allows an alternative means of compliance with the experience requirements established by Part 1, provided that the approved training organization demonstrates to the satisfaction of the Licensing Authority that the training provides a level of competency at least equivalent to that provided by the minimum experience requirements for personnel not receiving such approved training.

*Note*: A comprehensive training scheme for the aircraft maintenance (technician /engineer/mechanic) licence, including the various levels of competency, is contained in the Procedures for Air Navigation Services — Training (Doc 9868, PANS-TRG).

3.2 When a Licensing Authority approves a training programme for a multi-crew pilot licence, the approved training organization shall demonstrate to the satisfaction of the Licensing Authority that the training provides a level of competency in multi-crew operations at least equal to that met by holders of a commercial pilot licence, instrument rating and type rating for an aeroplane certificated for operation with a minimum crew of at least two pilots.

*Note*: Guidance on the approval of training programmes can be found in the Manual on the Approval of Training Organizations (Doc 9841).

4. **Safety Management**

4.1 States shall require, as part of their State safety programme, that an approved training organization that is exposed to safety risks during the provision of its services implement a safety management system acceptable to the State that, as a minimum:

a) identifies safety hazards;

b) ensures the implementation of remedial action necessary to maintain agreed safety performance;

c) provides for continuous monitoring and regular assessment of the safety performance; and

d) aims at a continuous improvement of the overall performance of the safety management system.


4.2 A safety management system shall clearly define lines of safety accountability throughout the approved training organization, including a direct accountability for safety on the part of senior management.

*Note1*: The framework for the implementation and maintenance of a safety management system is contained in Appendix 4. Guidance on safety management systems is contained in the Safety Management Manual (SMM) (Doc 9859).

*Note2*: A framework for the implementation and maintenance of a State safety programme is contained in Attachment C.

5. **Quality Assurance System**

The training organization shall establish a quality assurance system, acceptable to the Licensing Authority granting the approval, which ensures that training and instructional practices comply with all relevant requirements.

6. **Facilities**
6.1 The facilities and working environment shall be appropriate for the task to be performed and be acceptable to the Licensing Authority.

6.2 The training organization shall have, or have access to, the necessary information, equipment, training devices and material to conduct the courses for which it is approved.

6.3 Synthetic training devices shall be qualified according to requirements established by the State and their use shall be approved by the Licensing Authority to ensure that they are appropriate to the task.

Note: The Manual of Criteria for the Qualification of Flight Simulation Training Devices (Doc 9625) provides guidance on the approval of flight simulators.

7. Personnel

7.1 The training organization shall nominate a person responsible for ensuring that it is in compliance with the requirements for an approved organization.

7.2 The organization shall employ the necessary personnel to plan, perform and supervise the training to be conducted.

7.3 The competence of instructional personnel shall be in accordance with procedures and to a level acceptable to the Licensing Authority.

7.4 The training organization shall ensure that all instructional personnel receive initial and continuation training appropriate to their assigned tasks and responsibilities. The training programme established by the training organization shall include training in knowledge and skills related to human performance.

Note: Guidance material to design training programmes to develop knowledge and skills in human performance can be found in the Human Factors Training Manual (Doc 9683).

8. Records

8.1 The training organization shall retain detailed student records to show that all requirements of the training course have been met as agreed by the Licensing Authority.

8.2 The training organization shall maintain a system for recording the qualifications and training of instructional and examining staff, where appropriate.

8.3 The records required by 8.1 shall be kept for a minimum period of two years after completion of the training. The records required by 8.2 shall be retained for a minimum period of two years after the instructor or examiner ceases to perform a function for the training organization.

9. Oversight

Contracting States shall maintain an effective oversight programme of the approved training organization to ensure continuing compliance with the approval requirements.

10. Evaluation and Checking

When Kuwait DGCA has authorized an approved training organization to conduct the testing required for the issuance of a licence or rating, the testing shall be conducted by personnel authorized by the Licensing Authority or designated by the training organization in accordance with criteria approved by the Licensing Authority.
APPENDIX 3 – REQUIREMENTS FOR THE ISSUE OF THE MULTI-CREW PILOT LICENCE — AEROPLANE

(Chapter 2, Section 2.5, refers)

1. Training

1.1 In order to meet the requirements of the multi-crew pilot licence in the aeroplane category, the applicant shall have completed an approved training course. The training shall be competency-based and conducted in a multi-crew operational environment.

1.2 During the training, the applicant shall have acquired the knowledge, skills and attitudes required as the underpinning attributes for performing as a co-pilot of a turbine-powered air transport aeroplane certificated for operation with a minimum crew of at least two pilots.

2. Assessment level

The applicant for the multi-crew pilot licence in the aeroplane category shall have satisfactorily demonstrated performance in all the nine competency units specified in 3, at the advanced level of competency as defined in Attachment B.

Note: The training scheme for the multi-crew pilot licence in the aeroplane category, including the various levels of competency are contained in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868).

3. Competency units

The nine competency units that an applicant has to demonstrate in accordance with Chapter 2, 2.5.1.3, are as follows:

1. apply threat and error management (TEM) principles;
2. perform aeroplane ground operations;
3. perform take-off;
4. perform climb;
5. perform cruise;
6. perform descent;
7. perform approach;
8. perform landing; and
9. perform after-landing and aeroplane post-flight operations.

Note1: Competency units are broken down into their constituent elements, for which specific performance criteria have been defined. Competency elements and performance criteria are contained in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868).

Note2: The application of threat and error management principles is a specific competency unit that is to be integrated with each of the other competency units for training and testing purposes.

4. Simulated flight

Note: The Manual of Criteria for the Qualification of Flight Simulation Training Devices (Doc 9625), Volume I – Aeroplanes, provides guidance on the qualification of flight simulation training devices used in training programmes. The manual defines seven examples of flight simulation training devices based on the specific training being conducted, including four examples for the four phases of multi-crew pilot licence training defined in Attachment B of Annex 1. The numbering system used in Doc 9625 is different from the numbering used in 4.2.

4.1 The flight simulation training devices used to gain the experience specified in Chapter 2, 2.5.3.3, shall have been approved by the Licensing Authority.
4.2 Flight simulation training devices shall be categorized as follows:

a) **Type I.** E-training and part tasking devices approved by the Licensing Authority that have the following characteristics:
   - involve accessories beyond those normally associated with desktop computers, such as functional replicas of a throttle quadrant, a side-stick controller, or an FMS keypad; and
   - involve psychomotor activity with appropriate application of force and timing of responses.

b) **Type II.** A flight simulation training device that represents a generic turbine-powered aeroplane.

   **Note:** This requirement can be met by a flight simulation training device equipped with a daylight visual system and otherwise meeting, at a minimum, the specifications equivalent to FAA FTD Level 5, or JAA FNPT II, MCC.

c) **Type III.** A flight simulation training device that represents a multi-engined turbine-powered aeroplane certificated for a crew of two pilots with enhanced daylight visual system and equipped with an autopilot.

   **Note:** This requirement can be met by a flight simulation training device equipped with a daylight visual system and otherwise meeting, at a minimum, the specifications equivalent to a Level B simulator as defined in JAR STD 1A, as amended; and in FAA AC 120-40B, as amended, including Alternate Means of Compliance (AMOC), as permitted in AC 120-40B. (Some previously evaluated Level A full flight simulators that have been approved for training and checking required maneuvers may be used.)

d) **Type IV.** Fully equivalent to a Level D flight simulator or to a Level C flight simulator with an enhanced daylight visual system.

   **Note:** This requirement can be met by a flight simulation training device meeting, at a minimum, the specifications equivalent to a Level C and Level D simulator as defined in JAR STD 1A, as amended; and in FAA AC 120-40B, as amended, including Alternate Means of Compliance (AMOC), as permitted in AC 120-40B.
APPENDIX 4 – FRAMEWORK FOR SAFETY MANAGEMENT SYSTEMS (SMS)

(Chapter 1, 1.2.8 refers)

This appendix specifies the framework for the implementation and maintenance of a safety management system (SMS) by an approved training organization. An SMS is a management system for the management of safety by an organization. The framework includes four components and twelve elements representing the minimum requirements for SMS implementation. The implementation of the framework shall be commensurate with the size of the organization and the complexity of the services provided.

This appendix also includes a brief description of each element of the framework.

1. **Safety Policy and Objectives**
   1.1 Management commitment and responsibility
   1.2 Safety accountabilities
   1.3 Appointment of key safety personnel
   1.4 Coordination of emergency response planning
   1.5 SMS documentation

2. **Safety Risk Management**
   2.1 Hazard identification
   2.2 Safety risk assessment and mitigation

3. **Safety Assurance**
   3.1 Safety performance monitoring and measurement
   3.2 The management of change
   3.3 Continuous improvement of the SMS

4. **Safety Promotion**
   4.1 Training and education
   4.2 Safety communication

1. **Safety Policy and Objectives**

   1. **Management Commitment and Responsibility**

   The approved training organization shall define the organization’s safety policy which shall be in accordance with international and national requirements, and which shall be signed by the accountable executive of the organization. The safety policy shall reflect organizational commitments regarding safety; shall include a clear statement about the provision of the necessary resources for the implementation of the safety policy; and shall be communicated, with visible endorsement, throughout the organization. The safety policy shall include the safety reporting procedures; shall clearly indicate which types of operational behaviours are unacceptable; and shall include the conditions under which disciplinary action would not apply. The safety policy shall be periodically reviewed to ensure it remains relevant and appropriate to the organization.
1.2 Safety Accountabilities

The approved training organization shall identify the accountable executive who, irrespective of other functions, shall have ultimate responsibility and accountability, on behalf of the approved training organization, for the implementation and maintenance of the SMS. The approved training organization shall also identify the accountabilities of all members of management, irrespective of other functions, as well as of employees, with respect to the safety performance of the SMS. Safety responsibilities, accountabilities and authorities shall be documented and communicated throughout the organization, and shall include a definition of the levels of management with authority to make decisions regarding safety risk tolerability.

1.3 Appointment of Key Safety Personnel

The approved training organization shall identify a safety manager to be the responsible individual and focal point for the implementation and maintenance of an effective SMS.

1.4 Coordination of Emergency Response Planning

The approved training organization shall ensure that an emergency response plan transition from normal to emergency operations and the return to normal operations is properly coordinated with the emergency response plans of those organizations it must interface with during the provision of its services.

1.5 SMS Documentation

The approved training organization shall develop an SMS implementation plan, endorsed by senior management of the organization that defines the organization’s approach to the management of safety in a manner that meets the organization’s safety objectives. The approved training organization shall develop and maintain SMS documentation describing the safety policy and objectives, the SMS requirements, the SMS processes and procedures, the accountabilities, responsibilities and authorities for processes and procedures, and the SMS outputs.

Also as part of the SMS documentation, the approved training organization shall develop and maintain a Safety Management Systems Manual (SMSM), to communicate its approach to the management of safety throughout the organization.

2. Safety Risk Management

2.1 Hazard Identification

The approved training organization shall develop and maintain a formal process that ensures that hazards in operations are identified. Hazard identification shall be based on a combination of reactive, proactive and predictive methods of safety data collection.

2.2 Safety Risk Assessment and Mitigation

The approved training organization shall develop and maintain a formal process that ensures analysis, assessment and control of the safety risks in training operations.
3. Safety Assurance

3.1 Safety Performance Monitoring and Measurement

The approved training organization shall develop and maintain the means to verify the safety performance of the organization and to validate the effectiveness of safety risk controls. The safety performance of the organization shall be verified in reference to the safety performance indicators and safety performance targets of the SMS.

3.2 The Management of Change

The approved training organization shall develop and maintain a formal process to identify changes within the organization which may affect established processes and services; to describe the arrangements to ensure safety performance before implementing changes; and to eliminate or modify safety risk controls that are no longer needed or effective due to changes in the operational environment.

3.3 Continuous Improvement of the SMS

The approved training organization shall develop and maintain a formal process to identify the causes of substandard performance of the SMS, determine the implications of substandard performance of the SMS in operations, and eliminate or mitigate such causes.

4. Safety Promotion

4.1 Training and Education

The approved training organization shall develop and maintain a safety training programme that ensures that personnel are trained and competent to perform the SMS duties. The scope of the safety training shall be appropriate to each individual's involvement in the SMS.

4.2 Safety Communication

The approved training organization shall develop and maintain formal means for safety communication that ensures that all personnel are fully aware of the SMS, conveys safety-critical information, and explains why particular safety actions are taken and why safety procedures are introduced or changed.
APPENDIX 5 - TESTS : GENERAL PROCEDURES

Tests prescribed under this part are given at times, places and by persons designated by the DGCA.

1) Written Test.
   An applicant for Type Rating written tests must:
   a) Show that he holds a Commercial Pilot Licence acceptable to the DGCA;
   b) Satisfactorily complete the ground instruction course required by this part for the type rating sought;
   c) Present an official document showing that he is legally employed by a Kuwaiti organization, holds a valid identification, and that he meets the age requirements;
   d) Attain the minimum passing mark as specified in Paragraph 2 below.

2) Test Policy
   a) The test paper consists of questions grouped to cover the main aircraft systems and limitations (modules);
   b) The overall minimum passing mark is 75%;
   c) There is no negative marking;
   d) Failure in one module an oral test may be taken at the discretion of the licensing authority.
   e) Failure in two modules or less constitutes the requirement for retest in the failed modules only;
   f) Failure in only one module constitutes the requirement for oral retest, subject to the examiner assessment;
   g) Failure in more than two modules constitutes the requirement for a full retest.

3) Prerequisites for Flight Tests.
   To be eligible for a flight test the applicant must:
   a) Have passed the required written test within 60 days of the date of the flight test;
   b) Have the applicable instruction and aeronautical experience prescribed in this part;
   c) Hold a current Medical Certificate appropriate to the certificate he seeks;
   d) Meet the age requirement for the issuance of the licence or rating he seeks;
   e) Show evidence that he has been given simulator and/or flight instruction in preparation for the flight test by an appropriate Authorized Examiner, within 60 days preceding the date of flight test, which finds him competent to satisfactorily complete the test.
4) **Flight Test: Required Aircraft and Equipment.**

a) **General:** An applicant for a licence or rating under this part must furnish, for each flight test that he is required to take, an appropriate aircraft of Kuwaiti registry that has a current Standard Airworthiness Certificate.

b) **Required equipment:** Aircraft furnished for a flight test must have:

i) The equipment for each pilot operation required for the flight test.

ii) No prescribed operating limitation that will prohibit its use by any pilot operation required for the test.

iii) Pilot seats with adequate visibility such that each Pilot may operate the aircraft safely, except as provided in (c) of this section; and

iv) Cockpit and outside visibility adequate to evaluate the performance of the applicant, where an additional jump seat is provided for the examiner.

c) **Simulated instrument flight equipment:** An applicant for any flight test involving flight manoeuvres solely by reference to instruments must furnish equipment, satisfactory to the examiner that excludes the visual reference of the applicant outside of the aircraft.

5) **Flight Tests: Status of DGCA Inspectors or Authorized Examiners.**

When a DGCA Inspector or Authorized Examiner conducts the flight test of an applicant for a Pilot or Flight Engineer Licence or Rating for the purpose of observing the applicant’s ability to perform satisfactorily the procedures and manoeuvres on the flight test, the Inspector or Examiner is not the Pilot-in-command of the aircraft during the flight test unless he acts in that capacity for the flight, or portion of the flight, by prior arrangement with the applicant or other person who would otherwise act as Pilot-in-command of the flight, or portion of the flight. There shall be no flight test on scheduled or non scheduled revenue flight.

6) **Re-testing after Failure.**

An applicant for a written or flight test who fails that test may not apply for re-testing until 15 days after the date he failed the test. However, he may apply for retesting before the 30 days have expired upon presenting a written statement from an Authorized Instructor/Authorized Examiner certifying that he has given flight or ground instruction as appropriate to the applicant and finds him competent to take the test.
APPENDIX 6 – LOG BOOKS

1) **General:**

The aeronautical training and experience used to meet the requirements for a certificate or rating, or the recent flight experience requirements of this Part, must be shown by a reliable record.

2) **Logbook entries:** Each Crew Member shall enter the following information for each flight or lesson logged:

   a) **General.**
      i) Date;
      ii) Total time of flight;
      iii) Place or points of departure and arrival;
      iv) Type and identification of aircraft.

   b) **Type of Pilot experience or training.**
      i) Pilot-in-command or Solo;
      ii) Second-in-command;
      iii) Flight instruction received from an Authorized Examiner;
      iv) Instrument flight instruction from an Authorized Examiner;
      v) Pilot ground trainer instructor;
      vi) Other Pilot time.

   c) **Conditions of flight.**
      i) Day or night;
      ii) Actual instrument;
      iii) Simulated instrument conditions;

3) **Logging of Pilot time:**

   a) **Solo flight time.** A Pilot may log as Solo flight time only that flight time when he is the sole occupant of the aircraft. However, a Student Pilot may also log as Solo flight time that time during which he acts as the Pilot-in-command of an aircraft requiring more than one commander.

   b) **Pilot-in-command flight time.**
      i) A Private or Commercial Pilot may log as Pilot-in-command time only that flight time during which that Pilot is the sole manipulator of the controls of an aircraft;
      ii) An Airline Transport Pilot may log as Pilot-in-command time all of the flight time during which he acts as Pilot-in-command;
      iii) An Authorized Examiner may log as Pilot-in-command time any flight time during which he acts as a Flight Instructor.

   c) **Second-in-Command flight time.**

      A Pilot may log as Second-in-command time all flight time during which he acts as Second-in-command of an aircraft on which more than one Pilot is required under the type certification of the aircraft or the regulations under which the flight is conducted.
d) Instrument flight time.
A Pilot may log as instrument flight time only that time during which he operates the aircraft solely by reference to instruments, under actual or simulated instrument flight conditions. Each entry must include the place and type of each instrument approach completed, and the name of the Safety Pilot for each simulated instrument flight. An Instrument Flight Instructor may log as instrument time that time during which he acts as Instrument Flight Instructor in actual instrument weather conditions.

e) Instruction time.
All time logged as flight instruction, instrument flight instruction, Pilot ground trainer instruction, or ground instruction time must be certified by the appropriately-rated and certified Instructor from who it was received.

4) Presentation of logbook:
A Pilot must present his logbook (or other record required by this section) for inspection upon request by the DGCA Inspector within 7 days.
APPENDIX 7 – FLIGHT SIMULATION TRAINING DEVICES AEROPLANE

For the purpose of complying with the standards of KCASR’s Part 1, 1.2.8 (Approved training and approved training organization), Kuwait DGCA hereby adapts JAR- FSTD A and JAR- FSTD H and all other related supporting documents as amended.

**Note1:** For more detailed regulations see (JAR-FSTD A) for aeroplanes.

**Note2:** For regulations regarding helicopters see (JAR-FSTD H).

**Note3:** Appropriate Authority (TAA) is an authority which is accepted by DGCA to carry on the Qualification of a FSTD.

**Note4:** Upon submission of an Air Operator's application for qualified FSTD, DGCA may accept the FSTD qualification for the intended training programme Approval (see KCASR’s 1, 1.2.8), or nominate a qualified Company Authorized Examiner or a Qualified DGCA Flight Operations Inspector to carry-on the required FSTD Validation Test (See Attachment D to Appendix 7 – Flight Simulation Training Devices Validation Test).

**Note5:** Upon receiving any complains on the efficiency of a FSTD from Company Authorized Examiner or DGCA Flight Operations Inspector, DGCA shall nominate a Qualified Company Authorized Examiner or DGCA Flight Operations Inspector to carry-on the required FSTD verification (See AC to FSTD A.020 - Validity of FSTD Qualification- Item2. Prerogative of DGCA).

**FSTD A.005 Terminology**

(See AC to JAR-FSTD A.005)

Because of the technical complexity of FSTD qualification, it is essential that standard terminology is used throughout. The following principal terms and abbreviations shall be used in order to comply with JAR–FSTD (A). Further terms and abbreviations are contained in AC to FSTD A.005.

**a)** *Flight Simulation Training Device (FSTD).* A training device which is a Full Flight Simulator (FFS), a Flight Training Device (FTD), a Flight & Navigation Procedures Trainer (FNPT), or a Basic Instrument Training Device (BITD).

**b)** *Full Flight Simulator (FFS).* A full size replica of a specific type or make, model and series aeroplane flight deck, including the assemblage of all equipment and computer programmes necessary to represent the aeroplane in ground and flight operations, a visual system providing an out of the flight deck view, and a force cueing motion system. It is in compliance with the minimum standards for FFS Qualification.

**c)** *Flight Training Device (FTD).* A full size replica of a specific aeroplane type’s instruments, equipment, panels and controls in an open flight deck area or an enclosed aeroplane flight deck, including the assemblage of equipment and computer software programmes necessary to represent the aeroplane in ground and flight conditions to the extent of the systems installed in the device. It does not require a force cueing motion or visual system. It is in compliance with the minimum standards for a specific FTD Level of Qualification.

**d)** *Flight and Navigation Procedures Trainer (FNPT).* A training device which represents the flight deck or cockpit environment including the assemblage of equipment and computer programmes necessary to represent an aeroplane or class of aeroplane in flight operations to the extent that the systems appear to function as in an aeroplane. It is in compliance with the minimum standards for a specific FNPT Level of Qualification.
e) **Basic Instrument Training Device (BITD).** A ground based training device which represents the student pilot's station of a class of aeroplanes. It may use screen based instrument panels and spring-loaded flight controls, providing a training platform for at least the procedural aspects of instrument flight.

f) **Other Training Device (OTD).** A training aid other than FFS, FTD, FNPT or BITD which provides for training where a complete flight deck environment is not necessary.

g) **Flight Simulation Training Device User Approval (FSTD User Approval).** The extent to which an FSTD of a specified Qualification Level may be used by persons, organisations or enterprises as approved by DGCA. It takes account of aeroplane to FSTD differences and the operating and training ability of the organisation.

h) **Flight Simulation Training Device Operator (FSTD operator).** That person, organisation or enterprise directly responsible to the Appropriate Authority for requesting and maintaining the qualification of a particular FSTD.

i) **Flight Simulation Training Device User (FSTD User).** The person, organisation or enterprise requesting training, checking and testing credits through the use of an FSTD.

j) **Flight Simulation Training Device Qualification (FSTD Qualification).** The level of technical ability of an FSTD as defined in the compliance document.

k) **BITD Manufacturer.** That organisation or enterprise being directly responsible to DGCA for requesting the initial BITD model qualification.

l) **BITD Model.** A defined hardware and software combination, which has obtained a qualification. Each BITD will equate to a specific model and be a serial numbered unit.

m) **Qualification Test Guide (QTG).** A document designed to demonstrate that the performance and handling qualities of an FSTD agree within prescribed limits with those of the aeroplane and that all applicable regulatory requirements have been met. The QTG includes both the aeroplane and FSTD data used to support the validation.

**FSTD A.015 Application for FSTD Qualification**

(See AC No. 1 to JAR-FSTD A.015)

(See AC No. 2 to JAR-FSTD A.015)

a) The FSTD operator requiring evaluation of a FFS, FTD or FNPT shall apply to the Appropriate Authority (TAA) giving 3 months notice. In exceptional cases this period may be reduced to one month at the discretion of The Appropriate Authority.

b) An FSTD Qualification Certificate will be issued following satisfactory completion of an evaluation of the FFS, FTD or FNPT by The Appropriate Authority.

c) For BITDs the manufacturer of a new BITD model which requires evaluation shall apply to the Appropriate Authority giving 3 months notice. In exceptional cases this period may be reduced to one month at the discretion of the Appropriate Authority.
d) A BITD Qualification Certificate will be issued for the BITD model to the manufacturer following satisfactory completion of an initial evaluation by the Appropriate Authority. This qualification certificate is valid for any devices manufactured to this standard without the need for the device to be subjected to further technical evaluation. The BITD model must clearly be identified by a BITD model number.

e) The numbering of the BITD model must clearly define the hardware and software configuration of the qualified BITD model. A running serial number shall follow the BITD model identification number.

**FSTD A.020 Validity of FSTD Qualification**

(See AC to JAR-FSTD A.020)

a) An FSTD qualification is valid for **12 months** unless otherwise specified by The Appropriate Authority.

b) An FSTD qualification revalidation can take place at any time within the **60 days** prior to the expiry of the validity of the qualification document. The new period of validity shall continue from the expiry date of the previous qualification document.

c) DGCA shall refuse, revoke, suspend or vary an FSTD qualification, if the provisions of FSTD A are not satisfied.

d) The qualification of each BITD model serial number is valid for **36 months** from the commencement of operation, unless reduced by the Appropriate Authority. It is the operator's responsibility to apply for the revalidation of the qualification.

**FSTD A.025 Rules Governing FSTD Operators**

(See AC No. 1 to JAR-FSTD A.025)

(See AC No. 2 to JAR-FSTD A.025)

(See AC No. 3 to JAR-FSTD A.025)

The FSTD operator shall demonstrate his capability to maintain the performance, functions and other characteristics specified for the FSTD Qualification Level as follows:

a) Quality System

1) A Quality System shall be established and a Quality Manager designated to monitor compliance with, and the adequacy of, procedures required to ensure the maintenance of the Qualification Level of FSTDs. Compliance monitoring shall include a feedback system to the Accountable Manager to ensure corrective action as necessary.

2) The Quality System shall include a Quality Assurance Programme that contains procedures designed to verify that the specified performance, functions and characteristics are being conducted in accordance with all applicable requirements, standards and procedures.

3) The Quality System and the Quality Manager shall be acceptable to the Appropriate Authority.

4) The Quality System shall be described in relevant documentation.
b) Updating. A link shall be maintained between the operator’s organization, DGCA and the relevant manufacturers to incorporate important modifications, especially:

1) Aeroplane modifications that are essential for training and checking shall be introduced into all affected FSTDs whether or not enforced by an airworthiness directive.

2) Modification of FSTDs, including motion and visual systems (where applicable):
   i) When essential for training and checking, FSTD operators shall update their FSTDs (for example in the light of data revisions). Modifications of the FSTD hardware and software that affect handling, performance and systems operation or any major modifications of the motion or visual system shall be evaluated to determine the impact on the original qualification criteria. FSTD operators shall prepare amendments for any affected validation tests. The FSTD operator shall test the FSTD to the new criteria.
   ii) The Appropriate Authority shall be advised in advance of any major changes to determine if the tests carried out by the FSTD operator are satisfactory. A special evaluation of the FSTD may be necessary prior to returning it to training following the modification.

3) BITD operators shall maintain a link between their own organisation, TAA and the BITD manufacturer to incorporate important modifications.

c) Installations. Ensure that the FSTD is housed in a suitable environment that supports safe and reliable operation.

1) The FSTD operator shall ensure that the FSTD and its installation comply with the local regulations for health and safety. However, as a minimum all FSTD occupants and maintenance personnel shall be briefed on FSTD safety to ensure that they are aware of all safety equipment and procedures in the FSTD in case of emergency.

2) The FSTD safety features such as emergency stops and emergency lighting shall be checked at least annually and recorded by the FSTD operator.

d) Additional Equipment. Where additional equipment has been added to the FSTD, even though not required for qualification, it will be assessed to ensure that it does not adversely affect the quality of training. Therefore any subsequent modification, removal or unserviceability could affect the qualification of the device.

**FSTD A.030 Requirements for FSTD qualified on or after 1 August 2008**

(See Appendix 1 to JAR– FSTD A.030)

(See AC No. 1 to JAR-FSTD A.030)

(See AC No. 2 to JAR-FSTD A.030)

(See AC No. 3 to JAR-FSTD A.030)

(See AC No. 4 to JAR-FSTD A.030)

(See AC No. 1 to JAR-FSTD A.030(c)(1))

(See AC No. 2 to JAR-FSTD A.030(c)(1))
a) Any FSTD submitted for initial evaluation on or after 1 August 2008 will be evaluated against applicable JAR-FSTD A criteria for the Qualification Levels applied for. Recurrent evaluations of a FSTD will be based on the same version of JAR-FSTD A that was applicable for its initial evaluation. An upgrade will be based on the currently applicable version of JAR-FSTD A.

b) A FSTD shall be assessed in those areas that are essential to completing the flight crewmember training and checking process as applicable.

c) The FSTD shall be subjected to:
   1) Validation tests and
   2) Functions & subjective tests

d) Data shall be of a standard that satisfies TAA before the FSTD can gain a Qualification Level.

e) The FSTD operator shall submit a QTG in a form and manner that is acceptable to TAA.

f) The QTG will only be approved after completion of an initial or upgrade evaluation, and when all the discrepancies in the QTG have been addressed to the satisfaction of TAA. After inclusion of the results of the tests witnessed by TAA, the approved QTG becomes the Master QTG (MQTG), which is the basis for the FSTD qualification and subsequent recurrent FSTD evaluations. A copy of the MQTG shall be delivered by the BITD manufacturer together with any BITD model delivered to an Operator.

g) The FSTD operator shall:
   1) Run the complete set of tests contained within the MQTG progressively between each annual evaluation by TAA. Results shall be dated and retained in order to satisfy both the FSTD operator and DGCA that FSTD standards are being maintained; and
   2) Establish a Configuration Control System to ensure the continued integrity of the hardware and software of the qualified FSTD.

FSTD A.031 Requirements for FFS qualified on or after 1 April 1998 and before 1 August 2008

Any FFS submitted for initial evaluation on or after 1 April 1998 and before 1 August 2008, shall automatically be granted an equivalent qualification under JAR-FSTD A with effect from the re-evaluation conducted at the end of the current validity period. This re-evaluation, and all future re-evaluations, will be conducted in accordance with the requirements of the same version of JAR-STD 1A, which was applicable for its last evaluation prior to implementation of JAR-FSTD A. Any upgrade will be based on the currently applicable version of JAR-FSTD A.

FSTD A.032 Requirements for Flight Training Devices (FTD) qualified on or after 1 July 2000 and before 1 August 2008

Any FTD submitted for initial evaluation on or after 1 January 2000 and before 1 August 2008, shall automatically be granted an equivalent qualification under JAR-FSTD A with effect from the re-evaluation conducted at the end of the current validity period. This re-evaluation, and all future re-evaluations, will be conducted in accordance with the requirements of the same version of JAR-STD 2A, which was applicable for its last evaluation prior to implementation of JAR-FSTD A. Any upgrade will be based on the currently applicable version of JAR-FSTD A.
FSTD A.033 Requirements for Flight & Navigation Procedures Trainers (FNPT) qualified on or after 1 July 1999 and before 1 August 2008

Any FNPT submitted for initial evaluation on or after 1 July 1999 and before 1 August 2008, shall automatically be granted an equivalent qualification under JAR-FSTD A with effect from the re-evaluation conducted at the end of the current validity period. This re-evaluation, and all future re-evaluations, will be conducted in accordance with the requirements of the same version of JAR-STD 3A, which was applicable for its last evaluation prior to implementation of JAR-FSTD A. Any upgrade will be based on the currently applicable version of JAR-FSTD A.

FSTD A.034 Requirements for Basic Instrument Training Devices (BITD) qualified on or after 1 January 2003 and before 1 August 2008

Any BITD submitted for initial evaluation on or after 1 January 2003 and before 1 August 2008, shall automatically be granted an equivalent qualification under JAR-FSTD A with effect from the re-evaluation conducted at the end of the current validity period. This re-evaluation, and all future re-evaluations, will be conducted in accordance with the requirements of the same version of JAR-STD 4A, which was applicable for its last evaluation prior to implementation of JAR-FSTD A. Any upgrade will be based on the currently applicable version of JAR-FSTD A.

FSTD A.035 Requirements for Full Flight Simulators approved or qualified before 1 April 1998

(See AC to JAR-FSTD A.035)

a) FFS approved or qualified in accordance with national regulations of JAA Member States before 1 April 1998 will either be recategorised or will continue to maintain their approval under the Grandfather Rights provision, in accordance with sub-paragraphs (c) and (d) below. For FFS that are not re-categorized, maximum credit shall under no circumstances exceed originally issued National credits.

b) FFS’s, neither previously recategorised nor with an approval maintained under the Grandfather Rights provision, will be qualified in accordance with JAR–FSTD A.030.

c) FFS that are not recategorised but that have a primary reference document used for their testing, may be qualified by TAA to an equivalent JAR–FSTD A Qualification Level, either AG, BG, CG or DG. An upgrade requires the recategorisation of the FFS.

1. To gain and maintain an equivalent Qualification Level, these FFS shall be assessed in those areas that are essential to completing flight crewmember training and checking process, as applicable.

2. The FFS shall be subjected to:
   i) validation tests; and
   ii) functions and subjective tests.

d) FFS that are not recategorised and that do not have a primary reference document used for their testing shall be qualified by special arrangement. Such FFS will be issued with a Special Category and shall be subjected to functions and subjective tests corresponding to those detailed in this document. In addition any previously recognised validation test shall be used.
FSTD A.036 Requirements for Flight Training Devices approved or qualified before 1 July 2000

(See AC to JAR-FSTD A.036)

a) FTDs approved or qualified in accordance with national regulations of JAA Members States before 1 July 2000 either will be recategorised or will continue to maintain their approval under the Grandfather Rights provision, in accordance with JAR–FSTD A.036(c) and JAR–FSTD A.036 (d).

b) FTDs, neither previously recategorised nor with an approval maintained under the Grandfather Rights provision, will be qualified in accordance with JAR–FSTD A.030.

c) FTDs that are not recategorised but that have a primary reference document used for their testing may be qualified by TAA to an equivalent JAR–FSTD Qualification Level, either 1G or 2G. These Qualification Levels refer to similar credits achieved by JAR–FSTD A Level 1 and 2.

1. To gain and maintain an equivalent Qualification Level, these FTDs shall be assessed in those areas which are essential to completing the flight crew member training and checking process, including:
   i) Longitudinal, lateral and directional handling qualities (where applicable);
   ii) Performance on the ground and in the air;
   iii) Specific operations where applicable;
   iv) Flight deck configuration;
   v) Functioning during normal, abnormal, emergency and, where applicable non normal operation;
   vi) Instructor station function and FTD control, and
   vii) Certain additional requirements depending on the Qualification Level and the installed equipment.

2. The FTD shall be subjected to:
   i) Validation Tests, and
   ii) Functions and Subjective Tests.

d) FTDs that are not recategorised and that do not have a primary reference document used for their testing shall be qualified by special arrangement.

1. Such FTDs will be issued with Special Categories.

2. These FTDs shall be subjected to the same Functions and Subjective Tests referred to in JAR–FSTD A.036 (c) (2) (ii).

3. In addition any previously recognised Validation Test shall be used.

FSTD A.040 Changes to qualified FSTD

a) Requirement to notify major changes to a FSTD. The operator of a qualified FSTD shall in form TAA of proposed major changes such as:

1. Aeroplane modifications, which affect FSTD qualification.

2. FSTD hardware and or software modifications that could affect the handling qualities, performances or system representations.
3. Relocation of the FSTD; and
4. Any deactivation of the FSTD.

DGCA may complete a special evaluation following major changes or when a FSTD appears not to be performing at its initial Qualification Level.

b) **Upgrade of a FSTD.** A FSTD may be upgraded to a higher Qualification Level. Special evaluation is required before the award of a higher Level of Qualification.

1. If an upgrade is proposed the FSTD operator shall seek the advice of DGCA and give full details of the modifications. If the upgrade evaluation does not fall upon the anniversary of the original qualification date, a special evaluation is required to permit the FSTD to continue to qualify even at the previous Qualification Level.

2. In the case of a FSTD upgrade, an FSTD operator shall run all validation tests for the requested Qualification Level. Results from previous evaluations shall not be used to validate FSTD performance for the current upgrade.

c) **Relocation of a FSTD**

1. In instances where a FSTD is moved to a new location, TAA shall be advised before the planned activity along with a schedule of related events.

2. Prior to returning the FSTD to service at the new location, the FSTD operator shall perform at least one third of the validation tests and, functions and subjective tests to ensure that the FSTD performance meets its original qualification standard. A copy of the test documentation shall be retained together with the FSTD records for review by DGCA.

3. An evaluation of the FSTD in accordance with its original JAA qualification criteria shall be at the discretion of DGCA.

d) **Deactivation of a currently qualified FSTD**

1. If a FSTD operator plans to remove a FSTD from active status for prolonged periods, DGCA shall be notified and suitable controls established for the period during which the FSTD is inactive.

2. The FSTD operator shall agree a procedure with TAA to ensure that the FSTD can be restored to active status at its original Qualification Level.

**FSTD A.045 Interim FSTD Qualification**

(See AC to JAR-FSTD A.045)

a) In case of new aeroplane programmes, special arrangements shall be made to enable an interim Qualification Level to be achieved.

b) For Full Flight Simulators, an Interim Qualification Level will only be granted at levels A, B or C.

c) Requirements, details relating to the issue, and the period of validity of an interim Qualification Level will be decided by TAA.
**FSTD A.050 Transferability of FSTD Qualification**

When there is a change of FSTD operator:

a) The new FSTD operator shall advise TAA in advance in order to agree upon a plan of transfer of the FSTD.

b) At the discretion of TAA, the FSTD shall be subject to an evaluation in accordance with its original JAA qualification criteria.

c) Provided that the FSTD performs to its original standard, its original Qualification Level shall be restored. Revised user approval(s) may also be required.

**Sub-Appendix 1 to FSTD A.030**

**Flight Simulation Training Device Standards**

This sub-appendix describes the minimum Full Flight Simulator (FFS), Flight Training Device (FTD), Flight and Navigation Procedures Trainer (FNPT) and Basic Instrument Training Devices (BITD) requirements for qualifying devices to the required Qualification Levels. Certain requirements included in this section shall be supported with a statement of compliance (SOC) and, in some designated cases, an objective test. The SOC will describe how the requirement was met. The test results shall show that the requirement has been attained. In the following tabular listing of FSTD standards, statements of compliance are indicated in the compliance column.

For FNPT use in Multi-Crew Co-operation (MCC) training the general technical requirement are expressed in the MCC column with additional systems, instrumentation and indicators as required for MCC training and operation.

**AC No 1 to FSTD A.015 - Composition of Evaluation Team**

(AC = Advisory Circular Joint)

1. To gain a Qualification Level, an FSTD is evaluated in accordance with a structured routine conducted by a technical team which is appointed by DGCA. The team normally consists of at least the following personnel:

   a) A technical FSTD inspector of TAA, or an accredited inspector from another JAA Authority, qualified in all aspects of flight simulation hardware, software and computer modeling or, exceptionally, a person designated by TAA with equivalent qualifications; and

   b) One of the following:

      i) A flight inspector of TAA, or an accredited inspector from another JAA Authority, who is qualified in flight crew training procedures and is holding a valid type rating on the aeroplane (or for BITD, class rated on the class of aeroplane) being simulated; or

      ii) A flight inspector of TAA who is qualified in flight crew training procedures assisted by a Type Rating Instructor, holding a valid type rating on the aeroplane (or for BITD, class rated on the class of aeroplane) being simulated; or, exceptionally,
iii) A person designated by TAA who is qualified in flight crew training procedures and is holding a valid type rating on the aeroplane (or for BITD, class rated on the class of aeroplane) being simulated and sufficiently experienced to assist the technical team. This person should fly out at least part of the functions and subjective test profiles. Where a designee is used as a substitute for one of TAA’s inspectors, the other person shall be a properly qualified inspector of TAA or an accredited inspector from another JAA Authority.

For an FTD level 1 and FNPT Type I, one suitably qualified Inspector may combine the functions in a. and b. above.

For a BITD this team consists of an Inspector from a JAA National Aviation Authority and one from another JAA National Aviation Authority, including the manufacturer’s Authority if applicable.

2. Additionally the following persons should be present:
   a) For FFS, FTD and FNPT a type or class rated Training Captain from the FSTD operator or main FSTD users.
   b) For all types, sufficient FSTD support staff to assist with the running of tests and operation of the instructor’s station.

3. On a case-by-case basis, when an FFS is being evaluated, TAA may reduce the evaluation team to an Authority flight inspector supported by a type rated training captain from a main flight simulator user for evaluation of a specific flight simulator of a specific FSTD operator, provided:
   a) This composition is not being used prior to the second recurrent evaluation;
   b) Such an evaluation will be followed by an evaluation with a full authority evaluation team;
   c) TAA flight inspector will perform some spot checks in the area of objective testing;
   d) No major change or upgrading has been applied since the directly preceding evaluation;
   e) No relocation of the FSTD has taken place since the last evaluation;
   f) A system is established enabling TAA to monitor and analyze the status of the FSTD on a continuous basis;

The FSTD hardware and software has been working reliably for the previous years. This should be reflected in the number and kind of (technical log) discrepancies and the results of the quality system audits.

**AC No. 2 to FSTD A.015 - FSTD Evaluations**

( See JAR–FSTD A.015 )

1. **General**

1.1 During initial and recurrent FSTD evaluations it will be necessary for TAA to conduct the Objective and Subjective tests described in JAR–FSTD A.030 and JAR–FSTD A.035, and detailed in AC No 1 to JAR-FSTD A.030. There will be occasions when all tests cannot be completed – for example during recurrent evaluations on a convertible FSTD – but arrangements should be made for all tests to be completed within a reasonable time.
1.2 Following an evaluation, it is possible that a number of defects may be identified. Generally these defects should be rectified and TAA notified of such action within 30 days. Serious defects, which affect flight crew training, testing and checking, could result in an immediate downgrading of the Qualification Level, or if any defect remains unattended without good reason for period greater than 30 days, subsequent downgrading may occur or the FSTD Qualification could be revoked.

2. Initial Evaluations

2.1 Objective Testing

2.1.1 Objective Testing is centered around the QTG. Before testing can begin on an initial evaluation the acceptability of the validation tests contained in the QTG should be agreed with TAA well in advance of the evaluation date to ensure that the FSTD time especially devoted to the running of some of the tests by TAA is not wasted. The acceptability of all tests depends upon their content, accuracy, completeness and recency of the results.

2.1.2 Much of the time allocated to Objective Tests depends upon the speed of the automatic and manual systems set up to run each test and whether or not special equipment is required. TAA will not necessarily warn the FSTD operator of the sample validations tests which will be run on the day of the evaluation, unless special equipment is required. It should be remembered that the FSTD cannot be used for Subjective Tests whilst part of the QTG is being run. Therefore sufficient time (at least 8 consecutive hours) should be set aside for the examination and running of the QTG. A useful explanation of how the validation tests should be run is contained in the ‘RAeS Aeroplane Flight Simulator Evaluation Handbook’ (February 95 or as amended) produced in support of the ICAO Manual of Criteria for the Qualification of Flight Simulators and JAR–FSTD A.

2.2 Subjective Testing

2.2.1 The Subjective Tests for the evaluation can be found in AC No 1 to JAR-FSTD A.030, and a suggested Subjective Test Profile is described in subparagraph 4.6 below.

2.2.2 Essentially one working day is required for the Subjective Test routine, which effectively denies use of the FSTD for any other purpose.

2.3 Conclusion

2.3.1 To ensure adequate coverage of Subjective and Objective Tests and to allow for cost effective rectification and re-test before departure of the inspection team, adequate time (up to three consecutive days) should be dedicated to an initial evaluation of an FSTD.

3. Recurrent Evaluations

3.1 Objective Testing

3.1.1 During recurrent evaluations, TAA will wish to see evidence of the successful running of the QTG between evaluations. DGCA will select a number of tests to be run during the evaluation, including those that may be cause for concern. Again adequate notification would be given when special equipment is required for the test.
3.1.2 Essentially the time taken to run the Objective Tests depends upon the need for special equipment, if any, and the test system, and the FSTD cannot be used for Subjective Tests or other functions whilst testing is in progress. For a modern FSTD incorporating an automatic test system, four (4) hours would normally be required. FSTDs that rely upon Manual Testing may require a longer period of time.

3.2 Subjective Testing

3.2.1 Essentially the same subjective test routine should be flown as per the profile described in subparagraph 4.6 below with a selection of the subjective tests taken from AC No 1 to JAR-FSTD A.030.

3.2.2 Normally, the time taken for recurrent Subjective Testing is about four (4) hours, and the FSTD cannot perform other functions during this time.

3.3 Conclusion

3.3.1 To ensure adequate coverage of Subjective and Objective Tests during a recurrent evaluation, a total of 8 hours should be allocated, (4 hours for a BITD). However, it should be remembered that any FSTD deficiency that arises during the evaluation could necessitate the extension of the evaluation period.

3.3.2 In the case of a BITD, the recurrent evaluation may be conducted by one suitably qualified Flight Inspector only, in conjunction with the visit of any Registered Facility or inspection of any Flight Training Organisation, using the BITD.

4 Functions and Subjective Tests – Suggested Test Routine

4.1 During initial and recurrent evaluations of an FSTD, the competent Authority will conduct a series of Functions and Subjective Tests that together with the Objective Tests complete the comparison of the FSTD with the type or class of aeroplane.

4.2 Whereas functions tests verify the acceptability of the simulated aeroplane systems and their integration, Subjective Tests verify the fitness of the FSTD in relation to training, checking and testing tasks.

4.3 The FSTD should provide adequate flexibility to permit the accomplishment of the desired/required tasks while maintaining an adequate perception by the flight crew that they are operating in a real aeroplane environment. Additionally, the Instructor Operating Station (IOS) should not present an unnecessary distraction from observing the activities of the flight crew whilst providing adequate facilities for the tasks.

4.4 Section 1 of JAR–FSTD A sets out the requirements and the ACs in Section 2 the means of compliance for qualification. However, it is important that both the competent Authority and the FSTD operator understand what to expect from the routine of FSTD Functions and Subjective Tests. It should be remembered that part of the Subjective Tests routine for an FSTD should involve an uninterrupted fly-out (except for FTD level 1) comparable with the duration of typical training sessions in addition to assessment of flight freeze and repositioning. An example of such a profile is to be found in subparagraph 4.6 (4.7 for BITD) below. (A useful explanation of Functions and Subjective Tests and an example of Subjective Test routine check-list may be found in the RAeS Airplane Flight Simulator Evaluation Handbook Volume II (February 95 or as amended) produced in support of the ICAO Manual of Criteria for the Qualification of Flight Simulators and JAR–FSTD A.)
4.5 JAA Regulatory Authorities and FSTD operators who are unfamiliar with the evaluation process are advised to contact a suitably experienced JAA Authority.

4.6 Typical Test Profile for a FSTD A.

Note1: The Typical Test Profile (approximately 2 hours) should be flown at aeroplane masses at, or close to, the maximum allowable mass for the ambient atmospheric conditions. Those ambient conditions should be varied from Standard Atmosphere to test the validity of the limits of temperature and pressure likely to be required in the practical use of the FSTD. Visual exercises only apply to FSTDs fitted with a visual system.

Note2: Flight with AFCS

Note3: Manual handling qualities are purely generic and should not provide negative training

4.7 Typical Subjective Test Profile for BITDs

(approximately 2 hours) - items and altitudes as applicable.

i) Instrument departure, rate of climb, climb performance

ii) Level-off at 4000 ft

iii) Fail engine (if applicable)

iv) Engine out climb to 6000 ft (if applicable)

v) Engine out cruise performance (if applicable), restart engine

vi) All engine cruise performance with different power settings

vii) Descent to 2000 ft

viii) All engine performance with different configurations, followed by ILS approach

ix) All engine go-around

x) Non-precision approach
xi) Go-around with engine failure (if applicable)
xii) Engine out ILS approach (if applicable)
xiii) Go-around engine out (if applicable)
xiv) Non precision approach engine out (if applicable), followed by go-around
 xv) Restart engine (if applicable)
xvi) Climb to 4000 ft
 xvii) Maneuvering:
xviii) Normal turns left and right
 xix) Steep turns left and right
xx) Acceleration and deceleration within operational range
xxi) Approaching to stall in different configurations
xxii) Recovery from spiral dive
xxiii) Auto flight performance (if applicable)
xxiv) System malfunctions
 xxv) Approach

AC to FSTD A.020 - Validity of FSTD Qualification

Alternate Means of Compliance (See JAR-FSTD A.020)

1. Prerequisites

1.1 On a case-by-case basis, TAA may grant an extended validity of a FSTD qualification in excess of 12 months up to a maximum of 36 months, to a specific FSTD operator for a specific FSTD, provided:

a) an initial and at least one recurrent successful evaluation have been performed on this FSTD by the same Authority;
b) the FSTD operator has got a satisfactory record of successful regulatory FSTD evaluations over a period of at least 3 years;
c) the FSTD operator has established and successfully maintained a Quality System for at least 3 years;
d) TAA performs a formal audit of the FSTD operator’s Quality System every calendar year;
e) an accountable person of the FSTD operator with FSTD and training experience acceptable to TAA (such as a type rated training captain), reviews the regular reruns of the QTG and conducts the relevant function and subjective tests every 12 months;
f) a report detailing the results of the QTG rerun tests and function and subjective evaluation will be signed and submitted by the accountable person described under subparagraph (e) above to TAA.

2. Prerogative of DGCA

DGCA reserves the right to perform FSTD evaluations whenever it deems it necessary.
AC No. 1 to FSTD A.030 - FSTDs qualified on or after 1 August 2008

Acceptable Means of Compliance (See JAR–FSTD A.030)

1. Introduction

1.1 Purpose.

This AC establishes the criteria that define the performance and documentation requirements for the evaluation of FSTDs used for training, testing and checking of flight crewmembers. These test criteria and methods of compliance were derived from extensive experience of Authorities and the industry.

1.2 Background

1.2.1 The availability of advanced technology has permitted greater use of FSTDs for training, testing and checking of flight crewmembers. The complexity, costs and operating environment of modern aircraft also encourages broader use of advanced simulation. FSTDs can provide more in-depth training than can be accomplished in aircraft and provide a safe and suitable learning environment. Fidelity of modern FSTDs is sufficient to permit pilot assessment with the assurance that the observed behavior will transfer to the aircraft. Fuel conservation and reduction in adverse environmental effects are important by-products of FSTD use.

1.2.2 The methods, procedures, and testing criteria contained in this AC are the result of the experience and expertise of Authorities, operators, and aeroplane and FSTD manufacturers. From 1989 to 1992 a specially convened international working group under the sponsorship of the Royal Aeronautical Society (RAeS) held several meetings with the stated purpose of establishing common test criteria that would be recognised internationally. The final RAeS document, entitled International Standards for the Qualification of Airplane Flight Simulators, dated January 1992 (ISBN 0–903409–98–4), was the core document used to establish these JAA criteria and also the ICAO Manual of Criteria for the Qualification of Flight Simulators (1995 or as amended). An international review under the co-chair of FAA and JAA during 2001 was the basis for a major modification of the ICAO Manual of Criteria for the Qualification of Flight Simulators (1995 or as amended) and for the JAR-FSTD A document.

1.2.3 In showing compliance with JAR–FSTD A.030, TAA expects account to be taken of the IATA document entitled ‘Design and Performance Data Requirements for Flight Simulators’ – (1996 or as amended), as appropriate to the Qualification Level sought. In any case early contact with TAA is advised at the initial stage of FSTD build to verify the acceptability of the data.

1.3 Levels of FSTD qualification.

Parts 2, and 3 of this AC describe the minimum requirements for qualifying Level A, B, C and D aeroplane FFS, Level 1 and 2 aeroplane FTDs, FNPT types I, II and IIMCC and BITDs.

1.4 Terminology.

Terminology and abbreviations of terms used in this AC are contained in AC to JAR-FSTD A.005.
1.5 Testing for FSTD qualification

1.5.1 The FSTD should be assessed in those areas that are essential to completing the flight crewmember training, testing and checking process. This includes the FSTDs’ longitudinal and lateral directional responses; performance in take-off, climb, cruise, descent, approach, landing; specific operations; control checks; flight deck, flight engineer, and instructor station functions checks; and certain additional requirements depending on the complexity or Qualification Level of the FSTD. The motion and visual systems (where applicable) will be evaluated to ensure their proper operation. Tolerances listed for parameters in the validation tests (Paragraph 2) of this AC are the maximum acceptable for FSTD qualification and should not be confused with FSTD design tolerances.

1.5.2 For FFSs and FTDs the intent is to evaluate the FSTD as objectively as possible. Pilot acceptance, however, is also an important consideration. Therefore, the FSTD will be subjected to validation, and functions and subjective tests listed in Part 2 and 3 of this AC. Validation tests are used to compare objectively FFSs and FTDs with aircraft data to ensure that they agree within specified tolerances. Functions and subjective tests provide a basis for evaluating FSTD capability to perform over a typical training period and to verify correct operation of the FSTD.

1.5.3 For initial qualification of FFSs and FTDs aeroplane manufacturer’s validation flight test data is preferred. Data from other sources may be used, subject to the review and concurrence of TAA.

1.5.4 For FNPTs and BITDs generic data packages can be used. In this case, for an initial evaluation only Correct Trend and Magnitude (CT&M) can be used. The tolerances listed in this AC are applicable for recurrent evaluations and should be applied to ensure the device remains at the standard initially qualified. For initial qualification testing of FNPTs and BITDs, Validation Data will be used. They may be derived from a specific aeroplane within the class of aeroplane the FNPT or BITD is representing or they may be based on information from several aeroplanes within the class. With the concurrence of TAA, it may be in the form of a manufacturer’s previously approved set of Validation Data for the applicable FNPT or BITD. Once the set of data for a specific FNPT or BITD has been accepted and approved by TAA, it will become the Validation Data that will be used as reference for subsequent recurrent evaluations with the application of the stated tolerances.

The substantiation of the set of data used to build the Validation Data should be in the form of an engineering report and shall show that the proposed Validation Data are representative of the aeroplane or the class of aeroplane modeled. This report may include flight test data, manufacturer’s design data, information from the Aeroplane Flight Manual (AFM) and Maintenance Manuals, results of approved or commonly accepted simulations or predictive models, recognized theoretical results, information from the public domain, or other sources as deemed necessary by the FSTD manufacturer to substantiate the proposed model.

1.5.5 In the case of new aircraft programmes, the aircraft manufacturer’s data partially validated by flight test data, may be used in the interim qualification of the FSTD. However, the FSTD should be re-evaluated following the release of the manufacturer’s approved data. The schedule should be as agreed by DGCA, FSTD operator, FSTD manufacturer, and aircraft manufacturer.
1.5.6 FSTD operators seeking initial or upgrade evaluation of a FSTD should be aware that performance and handling data for older aircraft may not be of sufficient quality to meet some of the test standards contained in this AC. In this instance it may be necessary for an operator to acquire additional flight test data.

1.5.7 During FSTD evaluation, if a problem is encountered with a particular validation test, the test may be repeated to ascertain if the problem was caused by test equipment or FSTD operator error. Following this, if the test problem persists, an FSTD operator should be prepared to offer an alternative test.

1.5.8 Validation tests that do not meet the test criteria should be addressed to the satisfaction of TAA.

1.6 Qualification Test Guide (QTG)

1.6.1 The QTG is the primary reference document used for evaluating a FSTD. It contains test results, statements of compliance and other information for the evaluator to assess if the FSTD meets the test criteria described in this AC.

1.7 Configuration control. A configuration control system should be established and maintained to ensure the continued integrity of the hardware and software as originally qualified.

1.8 Procedures for initial FSTD qualification

1.8.1 The request for evaluation should reference the QTG and also include a statement that the FSTD operator has thoroughly tested the FSTD and that it meets the criteria described in this document except as noted in the application form. The FSTD operator – for a BITD the manufacturer - should further certify that all the QTG checks, for the requested Qualification Level, have been achieved and that the FSTD is representative of the respective aeroplane or, for FNPTs and BITDs representative of the respective class of aeroplane.

1.9 FSTD recurrent qualification basis

1.9.1 Following satisfactory completion of the initial evaluation and qualification tests, a periodic check system should be established to ensure that FSTDs continue to maintain their initially qualified performance, functions and other characteristics.

1.9.2 The FSTD operator should run the complete QTG, which includes validation, functions & subjective tests, between each annual evaluation by the Authority. As a minimum, the QTG tests should be run progressively in at least four approximately equal 3 monthly blocks on an annual cycle. Each block of QTG tests should be chosen to provide coverage of the different types of validation, functions & subjective tests. Results shall be dated and retained in order to satisfy both the FSTD operator as well as the Authority that the FSTD standards are being maintained. It is not acceptable that the complete QTG is run just prior to the annual evaluation.

2. FSTD Validation Tests

2.1 General

2.1.1 FSTD performance and system operation should be objectively evaluated by comparing the results of tests conducted in the FSTD with aeroplane data unless specifically noted otherwise. To facilitate the validation of the FSTD, an appropriate recording device acceptable to the Authority should be used to record each validation test result. These recordings should then be compared to the approved validation data.
2.1.2 Certain tests in this ACJ are not necessarily based upon validation data with specific tolerances. However, these tests are included here for completeness, and the required criteria should be fulfilled instead of meeting a specific tolerance.

2.2 Test requirements

2.2.1 The ground and flight tests required for qualification are listed in the table of FSTD Validation Tests. Computer generated FSTD test results should be provided for each test. The results should be produced on an appropriate recording device acceptable to the Authority. Time histories are required unless otherwise indicated in the table of validation tests.

2.2.2 Approved validation data that exhibit rapid variations of the measured parameters may require engineering judgment when making assessments of FSTD validity. Such judgment should not be limited to a single parameter. All relevant parameters related to a given manoeuvre or flight condition should be provided to allow overall interpretation. When it is difficult or impossible to match FSTD to aeroplane data or approved validation data throughout a time history, differences should be justified by providing a comparison of other related variables for the condition being assessed.

2.3 Table of FSTD Validation Tests

2.3.1 A number of tests within the QTG have had their requirements reduced to ‘Correct Trend and Magnitude’ (CT&M) for initial evaluations thereby avoiding the need for specific Flight Test Data. Where CT&M is used it is strongly recommended that an automatic recording system be used to ‘footprint’ the baseline results thereby avoiding the effects of possible divergent subjective opinions on recurrent evaluation.

However, the use of CT&M is not to be taken as an indication that certain areas of simulation can be ignored. It is imperative that the specific characteristics are present, and incorrect effects would be unacceptable.

2.3.2 In all cases the tests are intended for use in recurrent evaluations at least to ensure repeatability.

Note: Table of FSTD Validation Tests (FSTD A from page 2-C-27 to page 2-C-74).

2.4 Information for Validation Tests

2.4.1 Control dynamics

2.4.1.1 General

The characteristics of an aircraft flight control system have a major effect on handling qualities. A significant consideration in pilot acceptability of an aircraft is the ‘feel’ provided through the flight controls. Considerable effort is expended on aircraft feel system design so that pilots will be comfortable and will consider the aircraft desirable to fly. In order for a FSTD to be representative, it too should present the pilot with the proper feel – that of the aircraft being simulated. Compliance with this requirement should be determined by comparing a recording of the control feel dynamics of the FSTD to actual aircraft measurements in the relevant configurations.

3. Functions and Subjective Tests

3.1 Discussion
3.1.1 Accurate replication of aeroplane systems functions will be checked at each flight crewmember position. This includes procedures using the operator’s approved manuals, aeroplane manufacturers approved manuals and checklists. A useful source of guidance for conducting the tests required to establish that the criteria set out in this document are complied with by the flight simulator under evaluation are published in the RAeS Airplane Flight Simulator Evaluation Handbook.

Handling qualities, performance, and FSTD systems operation will be subjectively assessed. In order to assure the functions tests are conducted in an efficient and timely manner, operators are encouraged to coordinate with the appropriate Authority responsible for the evaluation so that any skills, experience or expertise needed by the Authority in charge of the evaluation team are available.

3.1.2 The necessity of functions and subjective tests arises from the need to confirm that the simulation has produced a totally integrated and acceptable replication of the aeroplane. Unlike the objective tests listed in paragraph 2 above, the subjective testing should cover those areas of the flight envelope which may reasonably be reached by a trainee, even though the FSTD has not been approved for training in that area.

Thus it is prudent to examine, for example, the normal and abnormal FSTD performance to ensure that the simulation is representative even though it may not be a requirement for the level of qualification being sought. (Any such subjective assessment of the simulation should include reference to paragraph 2 and 3 above in which the minimum objective standards acceptable for that Qualification Level are defined. In this way it is possible to determine whether simulation is an absolute requirement or just one where an approximation, if provided, has to be checked to confirm that it does not contribute to negative training.)

3.1.3 At the request of the Authority, the FSTD may be assessed for a special aspect of an operator’s training programme during the functions and subjective portion of an evaluation. Such an assessment may include a portion of a Line Oriented Flight Training (LOFT) scenario or special emphasis items in the operator’s training programme. Unless directly related to a requirement for the current Qualification Level, the results of such an evaluation would not affect the FSTD’s current status.

3.1.4 Functions tests will be run in a logical flight sequence at the same time as performance and handling assessments. This also permits real time FSTD running for 2 to 3 hours, without repositioning or flight or position freeze, thereby permitting proof of reliability.

3.2 Test requirements

3.2.1 The ground and flight tests and other checks required for qualification are listed in the table of functions and subjective tests. The table includes manoeuvres and procedures to assure that the FSTD functions and performs appropriately for use in pilot training, testing and checking in the manoeuvres and procedures normally required of a training, testing and checking programme.

3.2.2 Manoeuvres and procedures are included to address some features of advanced technology aeroplanes and innovative training programmes. For example, ‘high angle of attack maneuvering’ is included to provide an alternative to ‘approach to stalls’. Such an alternative is necessary for aeroplanes employing flight envelope limiting technology.
3.2.3 All systems functions will be assessed for normal and, where appropriate, alternate operations. Normal, abnormal, and emergency procedures associated with a flight phase will be assessed during the evaluation of manoeuvres or events within that flight phase. Systems are listed separately under ‘any flight phase’ to assure appropriate attention to systems checks.

3.2.4 When evaluating functions and subjective tests, the fidelity of simulation required for the highest level of qualification should be very close to the aeroplane. However, for the lower levels of qualification the degree of fidelity may be reduced in accordance with the criteria contained in paragraph 2 above.

3.2.5 Evaluation of the lower orders of FSTD should be tailored only to the systems and flight conditions which have been simulated. Similarly, many tests will be applicable for automatic flight. Where automatic flight is not possible and pilot manual handling is required, the FSTD shall be at least controllable to permit the conduct of the flight.

3.2.6 Any additional capability provided in excess of the minimum required standards for a particular Qualification Level should be assessed to ensure the absence of any negative impact on the intended training and testing manoeuvres.

**Note1:** Functions and Subjective Tests (FSTD A from page 2-C-89 to Page 2-C-110)

**Note2:** See Attachment D to Appendix 7- Flight Simulation Training Devices Evaluation Tests.
# ATTACHMENT 'A' - ICAO LANGUAGE PROFICIENCY RATING SCALE

## 1.1 Expert, extended and operational levels

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>PRONUNCIATION</th>
<th>STRUCTURE</th>
<th>VOCABULARY</th>
<th>FLUENCY</th>
<th>COMPREHENSION</th>
<th>INTERACTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert</td>
<td>Pronunciation, stress, rhythm, and intonation, though possibly influenced by the first language or regional variation, almost never interfere with ease of understanding.</td>
<td>Both basic and complex grammatical structures and sentence patterns are consistently well controlled.</td>
<td>Vocabulary range and accuracy are sufficient to communicate effectively on a wide variety of familiar and unfamiliar topics. Vocabulary is idiomatic, nuanced, and sensitive to register.</td>
<td>Able to speak at length with a natural, effortless flow. Varies speech flow for stylistic effect, e.g. to emphasize a point. Uses appropriate discourse markers and connectors spontaneously.</td>
<td>Comprehension is consistently accurate in nearly all contexts and includes comprehension of linguistic and cultural subtleties.</td>
<td>Interacts with ease in nearly all situations. Is sensitive to verbal and non-verbal cues and responds to them appropriately.</td>
</tr>
<tr>
<td>Extended</td>
<td>Pronunciation, stress, rhythm, and intonation, though influenced by the first language or regional variation, rarely interfere with ease of understanding.</td>
<td>Basic grammatical structures and sentence patterns are consistently well controlled. Complex structures are attempted but with errors which sometimes interfere with meaning.</td>
<td>Vocabulary range and accuracy are sufficient to communicate effectively on common, concrete, and work-related topics. Paraphrases consistently and successfully. Vocabulary is sometimes idiomatic.</td>
<td>Able to speak at length with relative ease on familiar topics but may not vary speech flow as a stylistic device. Can make use of appropriate discourse markers or connectors.</td>
<td>Comprehension is accurate on common, concrete, and work related topics and mostly accurate when the speaker is confronted with a linguistic or situational complication or an unexpected turn of events. Is able to comprehend a range of speech varieties (dialect and/or accent) or registers</td>
<td>Responses are immediate, appropriate, and informative. Manages the speaker/listener relationship Effectively.</td>
</tr>
<tr>
<td>Operational 4</td>
<td>Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation but only sometimes interfere with ease of understanding</td>
<td>Basic grammatical structures and sentence patterns are used creatively and are usually well controlled. Errors may occur, particularly in unusual or unexpected circumstances, but rarely interfere with meaning.</td>
<td>Vocabulary range and accuracy are usually sufficient to communicate effectively on common, concrete, and work-related topics. Can often paraphrase successfully when lacking vocabulary in unusual or unexpected circumstances.</td>
<td>Produces stretches of language at an appropriate tempo. There may be occasional loss of fluency on transition from rehearsed or formulaic speech to spontaneous interaction, but this does not prevent effective communication. Can make limited use of discourse markers or connectors. Fillers are not distracting.</td>
<td>Comprehension is mostly accurate on common, concrete, and work related topics when the accent or variety used is sufficiently intelligible for an international community of users. When the speaker is confronted with a linguistic or situational complication or an unexpected turn of events, comprehension may be slower or require clarification strategies.</td>
<td>Responses are usually immediate, appropriate, and informative. Initiates and maintains exchanges even when dealing with an unexpected turn of events. Deals adequately with apparent misunderstandings by checking, confirming, or clarifying.</td>
</tr>
</tbody>
</table>

Levels 1, 2 and 3 are on subsequent page.
1.2 Pre-operational, elementary and pre-elementary levels

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>PRONUNCIATION</th>
<th>STRUCTURE</th>
<th>VOCABULARY</th>
<th>FLUENCY</th>
<th>FLUENCY</th>
<th>COMPREHENSION INTERACTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preoperational 3</td>
<td>Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation and usually interfere with ease of understanding.</td>
<td>Basic grammatical structures and sentence patterns associated with predictable situations are not always well controlled. Errors frequently interfere with meaning.</td>
<td>Vocabulary range and accuracy are often sufficient to communicate on common, concrete, or work-related topics, but range is limited and the word choice often inappropriate. It is often unable to paraphrase successfully when lacking vocabulary.</td>
<td>Produces stretches of language, but phrasing and pausing are often inappropriate. Hesitations or slowness in language processing may prevent effective communication. Fillers are sometimes distracting.</td>
<td>Comprehension is often accurate on common, concrete, and work related topics when the accent or variety used is sufficiently intelligible for an international community of users. May fail to understand a linguistic or situational complication or an unexpected turn of events.</td>
<td>Responses are sometimes immediate, appropriate, and informative. Can initiate and maintain exchanges with reasonable ease on familiar topics and in predictable situations. Generally inadequate when dealing with an unexpected turn of events.</td>
</tr>
<tr>
<td>Elementary 2</td>
<td>Pronunciation, stress, rhythm, and intonation are heavily influenced by the first language or regional variation and usually interfere with ease of understanding.</td>
<td>Shows only limited control of a few simple memorized grammatical structures and sentence patterns.</td>
<td>Limited vocabulary range consisting only of isolated words and memorized phrases.</td>
<td>Can produce very short, isolated, memorized utterances with frequent pausing and a distracting use of fillers to search for expressions and to articulate less familiar words.</td>
<td>Comprehension is limited to isolated, memorized phrases when they are carefully and slowly articulated.</td>
<td>Response time is slow and often inappropriate. Interaction is limited to simple routine exchanges.</td>
</tr>
<tr>
<td>Preelementary 1</td>
<td>Performs at a level below the Elementary level.</td>
<td>Performs at a level below the Elementary level.</td>
<td>Performs at a level below the Elementary level.</td>
<td>Performs at a level below the Elementary level.</td>
<td>Performs at a level below the Elementary level.</td>
<td>Performs at a level below the Elementary level.</td>
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</table>

**Note:** The Operational Level (Level 4) is the minimum required proficiency level for radiotelephony communication. Levels 1 through 3 describe Pre-elementary, Elementary, and Pre-operational levels of language proficiency, respectively, all of which describe a level of proficiency below the ICAO language proficiency requirement. Levels 5 and 6 describe Extended and Expert levels, at levels of proficiency more advanced than the minimum required Standard. As a whole, the scale will serve as benchmarks for training and testing, and in assisting candidates to attain the ICAO Operational Level (Level 4).
ATTACHMENT 'B' - MULTI-CREW PILOT LICENCE — AEROPLANE LEVELS OF COMPETENCY

1. Core Flying Skills
The level of competency at which the applicant shall have complied with the requirements for the private pilot licence specified in Chapter 2, 2.3, including night flight requirements, and, in addition, have completed, smoothly and with accuracy, all procedures and manoeuvres related to upset training and flight with reference solely to instruments. From the outset, all training is conducted in an integrated multi-crew, competency-based and threat and error management (TEM) environment. Initial training and instructional input levels are high as core skills are being embedded in the ab-initio application. Assessment at this level confirms that control of the aeroplane is maintained at all times in a manner such that the successful outcome of a procedure or a manoeuvre is assured.

2. Level 1 (Basic)
The level of competency at which assessment confirms that control of the aeroplane or situation is maintained at all times and in such a manner that if the successful outcome of a procedure or manoeuvre is in doubt, corrective action is taken. Performance in the generic cockpit environment does not yet consistently meet the Standards of knowledge, operational skills and level of achievement required in the core competencies. Continual training input is required to meet an acceptable initial operating standard. Specific performance improvement/ personal development plans will be agreed and the details recorded. Applicants will be continuously assessed as to their suitability to progress to further training and assessment in successive phases.

3. Level 2 (Intermediate)
The level of competency at which assessment confirms that control of the aeroplane or situation is maintained at all times and in such a manner that the successful outcome of a procedure or manoeuvre is assured. The training received at Level 2 shall be conducted under the instrument flight rules, but need not be specific to any one type of aeroplane. On completion of Level 2, the applicant shall demonstrate levels of knowledge and operational skills that are adequate in the environment and achieves the basic standard in the core capability. Training support may be required with a specific development plan to maintain or improve aircraft handling, behavioural performance in leadership or team management. Improvement and development to attain the Standard is the key performance objective. Any core competency assessed as less than satisfactory should include supporting evidence and a remedial plan.

4. Level 3 (Advanced)
The level of competency required to operate and interact as a copilot in a turbine-powered aeroplane certificated for operation with a minimum crew of at least two pilots, under visual and instrument conditions. Assessment confirms that control of the aeroplane or situation is maintained at all times in such a manner that the successful outcome of a procedure or manoeuvre is assured. The applicant shall consistently demonstrate the knowledge, skills and attitudes required for the safe operation of an applicable aeroplane type as specified in the performance criteria.

Note: Material on the development of performance criteria can be found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868).
ATTACHMENT 'C' – FRAMEWORK FOR THE STATE SAFETY PROGRAMME (SSP)

This attachment introduces a framework for the implementation and maintenance of a State Safety Programme (SSP) by a State. An SSP is a management system for the management of safety by the State. The framework contemplates four components and eleven elements, outlined hereunder. The implementation of an SSP is commensurate with the size and complexity of the State’s aviation system, and may require coordination among multiple authorities responsible for individual elements of civil aviation functions in the State. The SSP framework introduced in this attachment, and the Safety Management System (SMS) framework specified in Appendix 4, must be viewed as complementary, yet distinct, frameworks.

This attachment also includes a brief description of each element of the framework.

1. **State Safety Policy and Objectives**
   1.1 State safety legislative framework
   1.2 State safety responsibilities and accountabilities
   1.3 Accident and incident investigation
   1.4 Enforcement policy

2. **State Safety Risk Management**
   2.1 Safety requirements for the service provider’s SMS
   2.2 Agreement on the service provider’s safety performance

3. **State Safety Assurance**
   3.1 Safety oversight
   3.2 Safety data collection, analysis and exchange
   3.3 Safety-data-driven targeting of oversight of areas of greater concern or need

4. **State Safety Promotion**
   4.1 Internal training, communication and dissemination of safety information
   4.2 External training, communication and dissemination of safety information

**Note:** Within the context of this attachment the term "service provider" refers to any organization providing aviation services. The term includes approved training organizations that are exposed to safety risks during the provision of their services, aircraft operators, approved maintenance organizations, organizations responsible for type design and/or manufacture of aircraft, air traffic services providers and certified aerodromes, as applicable.

1. **State Safety Policy and Objectives**

1.1 **State Safety Legislative Framework**

The State has promulgated a national safety legislative framework and specific regulations, in compliance with international and national standards, that define how the State will conduct the management of safety in the State. This includes the participation of State aviation organizations in specific activities related to the management of safety in the State, and the establishment of the roles, responsibilities and relationships of such organizations. The safety legislative framework and specific regulations are periodically reviewed to ensure they remain relevant and appropriate to the State.
1.2 **State Safety Responsibilities and Accountabilities**
The State has identified, defined and documented the requirements, responsibilities and accountabilities regarding the establishment and maintenance of the SSP. This includes the directives to plan, organize, develop, maintain, control and continuously improve the SSP in a manner that meets the State’s safety objectives. It also includes a clear statement about the provision of the necessary resources for the implementation of the SSP.

1.3 **Accident and Incident Investigation**
The State has established an independent accident and incident investigation process, the sole objective of which is the prevention of accidents and incidents, and not the apportioning of blame or liability. Such investigations are in support of the management of safety in the State. In the operation of the SSP, the State maintains the independence of the accident and incident investigation organization from other State aviation organizations.

1.4 **Enforcement Policy**
The State has promulgated an enforcement policy that establishes the conditions and circumstances under which service providers are allowed to deal with, and resolve, events involving certain safety deviations, internally, within the context of the service provider’s Safety Management System (SMS), and to the satisfaction of the appropriate State authority. The enforcement policy also establishes the conditions and circumstances under which to deal with safety deviations through established enforcement procedures.

2. **State Safety Risk Management**

2.1 **Safety Requirements for the Service Provider’s SMS**
The State has established the controls which govern how service providers will identify hazards and manage safety risks. These include the requirements, specific operating regulations and implementation policies for the service provider’s SMS. The requirements, specific operating regulations and implementation policies are periodically reviewed to ensure they remain relevant and appropriate to the service providers.

2.2 **Agreement on the Service Provider’s Safety Performance**
The State has agreed with individual service providers on the safety performance of their SMS. The agreed safety performance of an individual service provider’s SMS is periodically reviewed to ensure it remains relevant and appropriate to the service providers.

3. **State Safety Assurance**

3.1 **Safety Oversight**
The State has established mechanisms to ensure effective monitoring of the eight critical elements of the safety oversight function. The State has also established mechanisms to ensure that the identification of hazards and the management of safety risks by service providers follow established regulatory controls (requirements, specific operating regulations and implementation policies). These mechanisms include inspections, audits and surveys to ensure that regulatory safety risk controls are appropriately integrated into the service provider’s SMS, that they are being practiced as designed, and that the regulatory controls have the intended effect on safety risks.
3.2 Safety Data Collection, Analysis and Exchange
The State has established mechanisms to ensure the capture and storage of data on hazards and safety risks at both an individual and aggregate State level. The State has also established mechanisms to develop information from the stored data, and to actively exchange safety information with service providers and/or other States as appropriate.

3.3 Safety-Data-Driven Targeting of Oversight of Areas of Greater Concern or Need
The State has established procedures to prioritize inspections, audits and surveys towards those areas of greater safety concern or need, as identified by the analysis of data on hazards, their consequences in operations, and the assessed safety risks.

4. State Safety Promotion
4.1 Internal Training, Communication and Dissemination of Safety Information
The State provides training and fosters awareness and two-way communication of safety-relevant information to support, within the State aviation organizations, the development of an organizational culture that fosters an effective and efficient SSP.

4.2 External Training, Communication and Dissemination of Safety Information
The State provides education and promotes awareness of safety risks and two-way communication of safety-relevant information to support, among service providers, the development of an organizational culture that fosters an effective and efficient SMS.
ATTACHMENT 'D' TO APPENDIX 7 - FLIGHT SIMULATION TRAINING DEVICE VALIDATION TEST

1. Introduction

1.1 JAR-FSTD A & H each gives plenty of information about what is necessary to gain qualification at the variously identified devices and levels. They also provide information and advice as to how to interpret the Regulations.

Note: There are no define rules or regulations in JAR-FSTD A or H nor any other set of Regulations on the qualification process, so individual National Authorities are free to adopt any process that enables all Rules to be implemented.

1.2 There is an advice in JAR-FSTD A & H suggesting that the parties engaged in any initial Evaluation (simulator manufacturer, purchaser, primary operator), excluding the role of the Purchaser in the manufacturer process which may begin before the award of the contract, shall make early contact with their Regulatory Authority to discuss the many aspects of the whole process.

1.3 Firstly under the process of Qualifications there are objective checks known as validation tests, secondly functional tests and lastly subjective checks. The most advanced FSTD have a larger proportion of objective validation requirements whilst the less advanced ones tend to be more subjective or functionally tested.

1.4 DGCA shall nominate a Qualified Company Authorized Examiner or Qualified DGCA Flight Operations Inspector for Initial FSTD Approval and/or any raised complains on an Approved FSTD;

For Approval Renewal this exercise is optional. (See Appendix 1 to JAR-FSTD A.030).

1.5 Flight Simulation Training Device Standards

The Form below, which can be used in FSTD evaluation, describes the minimum Full Flight Simulator (FFS) requirements for qualifying devices to the required Qualification Levels; Certain requirements included in this section shall be supported with a Statement of Compliance (SOC) and, in some designated cases, an objective test. The SOC will describe how the requirement was met. The test results shall show that the requirement has been attained.

Note1: For Flight Training Device (FTD), Flight and Navigation Procedures Trainer (FNPT) and Basic Instrument Training Devices (BITD) requirements for qualifying devices to the required Qualification Levels and MCC (Multi Crew Co-operation) minimum technical requirements are as for Level II refer to Appendix 1 to JAR-FSTD A.030 from page 1-C-7 to page 1-C-30.

### Flight Simulation Training Device Evaluation Report

<table>
<thead>
<tr>
<th>FSTD ID/Level</th>
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<tbody>
<tr>
<td>Airplane Model &amp; Series</td>
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<tr>
<td>Simulator Model</td>
<td></td>
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<tr>
<td>Manufacturer</td>
<td></td>
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<tr>
<td>Manufacture Date</td>
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<tr>
<td>Computer ID</td>
<td></td>
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<tr>
<td>Visual System Model</td>
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<tr>
<td>Motion System Model</td>
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**DGCA FOI:** ................................................................. Signature: ..............................
Date:......./....../........

**User's Authorized Examiner:** .................................. Signature: ..............................
Date:......./....../........

**FSTD Operator Representative:** .......................... Signature: ..............................
Date:......./....../........
<table>
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<th>FSTD STANDARD</th>
<th>A</th>
<th>B</th>
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<th>IR</th>
<th>COMPLIANCE</th>
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<tr>
<td>Part I – General</td>
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<tr>
<td>a.1 A fully enclosed flight deck.</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
<td>Flight deck observer seats are not considered to be additional flight crewmember duty stations and may be omitted.</td>
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<tr>
<td>a.3 Flight deck, a full scale replica of the aeroplane simulated.</td>
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<td></td>
<td>Bulkheads containing items such as switches, circuit breakers, supplementary radio panels, etc. to which the flight crew may require access during any event after pre-flight cockpit preparation is complete are considered essential and may not be omitted.</td>
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<tr>
<td>Equipment for operation of the cockpit windows shall be included in the FSTD, but the actual windows need not be operable.</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
<td>Bulkheads containing only items such as landing gear pin storage compartments, fire axes or extinguishers, spare light bulbs, aircraft document pouches etc. are not considered essential and may be omitted. Such items, or reasonable facsimile, shall still be available in the FSTD but may be relocated to a suitable location as near as practical to the original position. Fire axes and any similar purpose instruments need only be represented in silhouette.</td>
</tr>
<tr>
<td>The flight deck, for FSTD purposes, consists of all that space forward of a cross section of the fuselage at the most extreme aft setting of the pilots’ seats. Additional required flight crewmember duty stations and those required bulkheads aft of the pilot seats are also considered part of the flight deck and shall replicate the aeroplane.</td>
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<tr>
<td>a.4 Direction of movement of controls and switches identical to that in the aeroplane.</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td></td>
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<tr>
<td>b.1 Circuit breakers that affect procedures and/or result in observable cockpit indications properly located and functionally accurate</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td></td>
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<tr>
<td>c.1 Flight dynamics model that accounts for various combinations of drag and thrust normally encountered in flight corresponding to actual flight conditions, including the effect of change in aeroplane attitude, sideslip, thrust, drag, altitude, temperature, gross weight, moments of inertia, centre of gravity location, and configuration.</td>
<td>√</td>
<td>√</td>
<td>√</td>
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<tr>
<td>d.1 All relevant instrument indications involved in the simulation of the applicable aeroplane shall automatically respond to control movement by a flight crewmember or induced disturbance to the simulated aeroplane; e.g., turbulence or wind shear.</td>
<td>√</td>
<td>√</td>
<td>√</td>
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<tr>
<td>e.1 Communications, navigation, and caution and warning equipment corresponding to that installed in the applicant's aeroplane with operation within the tolerances prescribed for the applicable airborne equipment.</td>
<td>√</td>
<td>√</td>
<td>√</td>
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### FSTD STANDARD

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<th>COMPLIANCE</th>
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<tbody>
<tr>
<td><strong>e.3</strong> Navigational data with the corresponding approach facilities. Navigation aids should be usable within range without restriction</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>For all FFSs and FTDs where used for area or airfield competence training or checking, navigation data should be updated within 28 days.</td>
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</tr>
<tr>
<td><strong>f.1</strong> In addition to the flight crewmember duty stations, three suitable seats for the instructor, delegated examiner and Authority inspector. The Authority will consider options to this standard based on unique cockpit configurations. These seats shall provide adequate vision to the pilot’s panel and forward windows. Observer seats need not represent those found in the aeroplane but in the case of FSTDs fitted with a motion system, the seats shall be adequately secured to the floor of the FSTD, fitted with positive restraint devices and be of sufficient integrity to safely restrain the occupant during any known or predicted motion system excursion.</td>
<td>√</td>
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| **g.1** FSTD systems shall simulate applicable aeroplane system operation, both on the ground and in flight. Systems shall be operative to the extent that all normal, abnormal, an emergency operating procedures can be accomplished. |   |   |   |   | Where applicable and as required for training the following shall be available:
1. Position and flight freeze.
2. A facility to enable the dynamic plotting of the flight path on approaches, commencing at the final approach fix, including the vertical profile
3. Hard copy of map and approach plot |
| **h.1** Instructor controls shall enable the operator to control all required system variables and insert abnormal or emergency conditions into the aeroplane systems. | √ | √ | √ | √ |
| **i.1** Control forces and control travel shall correspond to that of the replicated aeroplane. Control forces shall react in the same manner as in the aeroplane under the same flight conditions. | √ | √ | √ | √ |
| **J.1** Ground handling and aerodynamic programming to include:
1. **Ground effect**: round-out, flare and touchdown. This requires data on lift, drag, pitching moment, trim and power in ground effect.
2. **Ground reaction**: reaction of the airplane upon contact with the runway during landing to include strut deflections, tyre friction, side forces, and other appropriate data, such as weight and speed, necessary to identify the flight condition and configuration.
3. **Ground handling characteristics**: steering inputs to include crosswind, braking, thrust reversing, deceleration and turning radius. |   |   |   |   | Statement of Compliance required. Tests required. For Level ‘A’ FFS, generic ground handling to the extent that allows turns within the confines of the runway, adequate control on flare, touchdown and roll-out (including from a cross-wind landing) only is acceptable. |
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<tr>
<th>FSTD STANDARD</th>
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| **k.1** Wind-shear models shall provide training in the specific skills required for recognition of wind shear phenomena and execution of recovery manoeuvres. Such models shall be representative of measured or accident derived winds, but may include simplifications which ensure repeatable encounters. For example, models may consist of independent variable winds in multiple simultaneous components. Wind models shall be available for the following critical phases of flight:  
1. Prior to take-off rotation  
2. At lift-off  
3. During initial climb  
4. (4) Short final approach |   |   |   |   |   |    | Tests required. |
| **L.1** Instructor controls for environmental effects including wind speed and direction shall be provided. | √ | √ | √ | √ |   |    | See ACJ No 1 to JAR-FSTD A.030, Para 2.3, g. |
| **m.1** Stopping and directional control forces shall be representative for at least the following runway conditions based on aeroplane related data:  
1. Dry  
2. Wet  
3. Icy  
4. Patchy wet  
5. Patchy icy  
| **n.1** Brake and tyre failure dynamics (including antiskid) and decreased brake efficiency due to brake temperatures shall be representative and based on aeroplane related data. |   |   |   |   |   | √ | Statement of Compliance required. |
| **o.1** A means for quickly and effectively conducting daily testing of FSTD programming and hardware shall be available. |   |   | √ | √ |   |    | Statement of Compliance required. |
| **p.1** Computer capacity, accuracy, resolution, and dynamic response shall be sufficient to fully support the overall fidelity, including its evaluation and testing. | √ | √ | √ | √ |   |    | Statement of Compliance required. |
**FSTD STANDARD**

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<td>Tests Required.</td>
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Control feel dynamics shall replicate the aeroplane simulated.
Free response of the controls shall match that of the aeroplane within the tolerances specified. Initial and upgrade evaluations will include control free response (pitch, roll and yaw controller) measurements recorded at the controls. The measured responses shall correspond to those of the aeroplane in take-off, cruise, and landing configurations.

1. For aeroplanes with irreversible control systems, measurements may be obtained on the ground if proper pitot static inputs are provided to represent conditions typical of those encountered in flight. Engineering validation or aeroplane manufacturer rationale will be submitted as justification to ground test or omit a configuration.

2. For FSTDs requiring static and dynamic tests at the controls, special test fixtures will not be required during initial evaluation if the FSTD operator’s MQTG shows both test fixture results and alternate test method results such as computer data plots, which were obtained concurrently. Repetition of the alternate method during initial evaluation may then satisfy this requirement.

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<td>Tests required.</td>
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One of the following two methods is acceptable as a means to prove compliance:

1. **Transport Delay**: A transport delay test may be used to demonstrate that the FSTD system response does not exceed 150 milliseconds. This test shall measure all the delay encountered by a step signal migrating from the pilot's control through the control loading electronics and interfacing through all the simulation software modules in the correct order, using a handshaking protocol, finally through the normal output interfaces to the motion system, to the visual system and instrument displays.

2. **Latency**: The visual system, flight deck instruments and initial motion system response shall respond to abrupt pitch, roll and yaw inputs from the pilot's position within 150 milliseconds of the time, but not before the time, when the aeroplane would respond under the same conditions.

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<td>s.1</td>
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<td>Statement of Compliance required.</td>
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Aerodynamic modeling shall be provided. This shall include, for aeroplanes issued an original type certificate after June 1980, low altitude level flight ground effect, Mach effect at high altitude, normal and reverse dynamic thrust effect on control surfaces, aeroelastic representations, and representations of non-linearities due to sideslip based on aeroplane flight test data provided by the manufacturer.

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<td>Statement of Compliance shall address each of these items. Separate tests for thrust effects and a Statement of Compliance are required.</td>
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<td>FSTD STANDARD</td>
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<td>t.1 Modeling that includes the effects of airframe and engine icing.</td>
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<td>Statement of Compliance required.</td>
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<td>u.1 Aerodynamic and ground reaction modeling for the effects of reverse thrust on directional control shall be provided.</td>
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<td>Statement of Compliance required.</td>
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<tr>
<td>v.1 Realistic aeroplane mass properties, including mass, centre of gravity and moments of inertia as a function of payload and fuel loading shall be implemented.</td>
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<td>Statement of Compliance required at initial evaluation. SOC shall include a range of tabulated target values to enable a demonstration of the mass properties model to be conducted from the instructor’s station.</td>
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<tr>
<td>w.1 Self-testing for FSTD hardware and programming to determine compliance with the FSTD performance tests shall be provided. Evidence of testing shall include FSTD number, date, time, conditions, tolerances, and the appropriate dependent variables portrayed in comparison with the aeroplane standard.</td>
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<td>Statement of Compliance required. Tests required</td>
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<tr>
<td>x.1 Timely and permanent update of hardware and programming subsequent to aeroplane modification sufficient for the Qualification Level sought.</td>
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<td>y.1 Daily pre-flight documentation either in the daily log or in a location easily accessible for review is required.</td>
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**Part II - Motion system**

| a.1 Motion cues as perceived by the pilot shall be representative of the aeroplane, e.g. touchdown cues shall be a function of the simulated rate of descend | √ | √ | √ | √ |  |  | For FSTDs where motion systems are not specifically required, but have been added, they will be assessed to ensure that they do not adversely affect the qualification of the FSTD. |
| b.1 A motion system shall: (1) Provide sufficient cueing, which may be of a generic nature to accomplish the required tasks. (2) Have a minimum of 3 degrees of freedom (pitch, roll & heave). (3) Produce cues at least equivalent to those of a six-degrees-of-freedom synergistic platform motion system. | √ |  |  |  |  |  | Statement of Compliance required. Tests required. |
| c.1 A means of recording the motion response time as required. | √ | √ | √ | √ |  |  |  |
### FSTD STANDARD

**d.1** Motion effects programming shall include:

1. Effects of runway rumble, oleo deflections, groundspeed, uneven runway, centerline lights and taxiway characteristics.
2. Buffets on the ground due to spoiler/speed brake extension and thrust reversal.
3. Bumps associated with the landing gear.
4. Buffet during extension and retraction of landing gear.
5. Buffet in the air due to flap and spoiler/speed-brake extension.
6. Approach to stall buffet.
7. Touchdown cues for main and nose gear.
8. Nose wheel scuffing.
10. Mach and manoeuvre buffet.
11. Tyre failure dynamics.
12. Engine malfunction and engine damage.
13. Tail and pod strike.

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For Level ‘A’ FFS: Effects may be of a generic nature sufficient to accomplish the required tasks.

**e.1** Motion vibrations: Tests with recorded results that allow the comparison of relative amplitudes versus frequency are required. Characteristic motion vibrations that result from operation of the aeroplane in so far as vibration marks an event or aeroplane state that can be sensed at the flight deck shall be present. The FSTD shall be programmed and instrumented in such a manner that the characteristic vibration modes can be measured and compared with aeroplane data.

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Statement of Compliance required.

Tests required.

### PART III - VISUAL SYSTEMS

**a.1** The visual system shall meet all the standards enumerated as applicable to the level of qualification requested by the applicant.

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**b.1** Continuous minimum collimated visual field-of-view of 45 degrees horizontal and 30 degrees vertical field of view simultaneously for each pilot.

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SOC is acceptable in place of this test.

**b.2** Continuous, cross-cockpit, minimum collimated visual field of view providing each pilot with 180 degrees horizontal and 40 degrees vertical field of view. Application of tolerances require the field of view to be not less than a total of 176 measured degrees horizontal field of view (including not less than ±88 measured degrees either side of the centre of the design eye point) and not less than a total of 36 measured degrees vertical field of view from the pilot’s and co-pilot’s eye points.

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Consideration shall be given to optimizing the vertical field of view for the respective aeroplane cut-off angle.

SOC is acceptable in place of this test.

**c.1** A means of recording the visual response time for visual systems.

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**d.1** System Geometry. The system fitted shall be free from optical discontinuities and artifacts that create non-realistic cues.

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Test required.

A Statement of Compliance is acceptable in place of this test.

**e.1** Visual textural cues to assess sink rate and depth perception during take-off and landing shall be provided.

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For Level ‘A’ FFS visual cueing shall be sufficient to support changes in approach path by using runway perspective.
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<th>FSTD STANDARD</th>
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<tr>
<td>f.1 Horizon, and attitude shall correlate to the simulated attitude indicator</td>
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<td>Statement of Compliance required</td>
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<td>g.1 Occulting - A minimum of ten levels shall be available.</td>
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<td>Occulting shall be demonstrated.</td>
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<td>h.1 Surface (Vernier) resolution shall occupy a visual angle of not greater than 2 arc minutes in the visual display used on scene from the pilot's eye point.</td>
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<td>Test and Statement of Compliance required confirming resolution.</td>
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<td>i.1 Surface contrast ratio shall be demonstrated by a raster drawn test pattern showing a contrast ratio of not less than 5:1</td>
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<td>Test and Statement of Compliance required</td>
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<tr>
<td>j.1 Highlight brightness shall be demonstrated using a raster drawn test pattern. The highlight brightness shall not be less than 20 cd/m² (6ft-lamberts).</td>
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<td>Test and Statement of Compliance required. Use of calligraphic lights to enhance raster brightness is acceptable.</td>
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<td>k.1 Light point size – not greater than 5 arc minutes.</td>
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<td>Test and Statement of Compliance required. This is equivalent to a light point resolution of 2.5 arc minutes</td>
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<td>L.1 Light point contrast ratio – not less than 10:1</td>
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<td>Test and Statement of compliance required.</td>
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<td>L.2 Light point contrast ratio – not less than 25:1</td>
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<td>Test and Statement of compliance required.</td>
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<tr>
<td>m.1 Daylight, twilight and night visual capability as applicable for level of qualification sought</td>
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<td>Statement of Compliance required for system capability. System objective and scene content tests are required.</td>
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<tr>
<td>m.2 The visual system shall be capable of meeting, as a minimum, the system brightness and contrast ratio criteria as applicable for level of qualification sought</td>
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<td>m.3 Total scene content shall be comparable in detail to that produced by 10000 visible textured surfaces and (in day) 6000 visible lights or (in twilight or night) 15000 visible lights, and sufficient system capacity to display 16 simultaneously moving objects.</td>
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<td>m.4 The system, when used in training, shall provide in daylight, full colour presentations and sufficient surfaces with appropriate textural cues to conduct a visual approach, landing and airport movement (taxi). Surface shading effects shall be consistent with simulated (static) sun position</td>
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### FSTD STANDARD

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<th><strong>m.5</strong> The system, when used in training, shall provide at twilight, as a minimum, full color presentations of reduced ambient intensity, sufficient surfaces with appropriate textural cues that include self illuminated objects such as road networks, ramp lighting and airport signage, to conduct a visual approach, landing and airport movement (taxi). Scenes shall include a definable horizon and typical terrain characteristics such as fields, roads and bodies of water and surfaces illuminated by representative own-ship lighting (e.g. landing lights). If provided, directional horizon lighting shall have correct orientation and be consistent with surface shading effects.</th>
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| **m.6** The system, when used in training, shall provide at night, as a minimum, all features applicable to the twilight scene, as defined above, with the exception of the need to portray reduced ambient intensity that removes ground cues that are not self-illuminating or illuminated by own-ship lights (e.g. landing lights). |  |  | √ | √ |  | √ | √ |

### Part IV - Sound System

| **a.1** Significant flight deck sounds which result from pilot actions corresponding to those of the aeroplane or class of aeroplane. | √ | √ | √ | √ |
| **b.1** Sound of precipitation, rain removal equipment and other significant aeroplane noises perceptible to the pilot during normal and abnormal operations and the sound of a crash when the FSTD is landed in excess of limitations. |  |  | √ | √ |
| **c.1** Comparable amplitude and frequency of flight deck noises, including engine and airframe sounds. The sounds shall be coordinated with the required weather. |  |  |  | √ |
| **d.1** The volume control shall have an indication of sound level setting which meets all qualification requirements. | √ | √ | √ | √ |

### PART IV: OTHERS

<p>| 1. Checks carried out in accordance with the QTG. |  | √ | √ |
| 2. System of routine maintenance in accordance with simulator manufacturer’s recommendations. |  | √ | √ |
| 3. Rectification of defects (provide list of acceptable deferred defects, if any). |  | √ | √ |</p>
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<td>4. Completion of on-site evaluation.</td>
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<td>including: administration, briefing rooms, engineering back-up facilities, emergency escape routes and signs etc.</td>
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**Note1:** For Test Profile (See KCASR’s Part I, Appendix 7 – Flight Simulation Training Devices, AC N0 2 – FSTD A.015 – FSTD Evaluation, 4.6 – Typical Test Profile for FSTD A).  

**Note2:** (A,B,C,D = Full Flight Simulator Levels), (SA = Satisfactory), (IR = Improvement Required)

**REMARKS AND RECOMMENDATIONS**

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ATTACHMENT 'E' – TRAINING PROGRAMME

1) **General.**

   a) Each Operator shall:

      i) Establish and obtain the appropriate initial and final approval from DGCA of a training programme that meets the requirements of this Attachment, and that ensures that each Crew Member, Authorized Examiner, Flight Instructor are trained accordingly to perform his assigned duties;

      ii) Provide adequate ground and flight-training facilities and properly-qualified Ground Instructors for the training required by this Part;

      iii) Provide and keep current with respect to each aircraft type and, if applicable, the particular variations within that aircraft type, appropriate training material, examinations, forms, instructions, and procedures for use in conducting the training and checks required by this Part; and

      iv) Provide an adequate number of Flight Instructors, Simulator Instructors, Technical Instructors and Safety Instructors to conduct the necessary training.

   b) Each Instructor who is responsible for a particular ground training subject, segment of flight training, course of training, proficiency check under this Part shall certify as to the proficiency and knowledge of the Crew Member or Instructor concerned upon completion of that training or check. That certification shall be made a part of the Crew Member’s record;

   c) Training subjects that are applicable to more than one aircraft or Crew Member position and that have been satisfactorily completed in connection with prior training for another aircraft or another Crew Member position, need not be repeated during subsequent training other than recurrent training;

2) **Training programme and revision: Initial and final approval.**

   a) To obtain initial and final approval of a training programme or a revision to an approved training programme, each Operator must submit to the DGCA:

      i) An outline of the proposed programme or revision, including an outline of the proposed or revised curriculum, that provides enough information about the proposed training programme;

      ii) Additional relevant information as may be requested by the DGCA.

   b) If the proposed training programme or revision complies with this Attachment, the DGCA grants initial approval in writing after which the Operator may conduct the training in accordance with that programme. The DGCA then evaluates the effectiveness of the training programme and advises the Operator of deficiencies, if any, that must be corrected;

   c) The DGCA grants final approval of the training programme or revision if the Operator shows that the training conducted under the initial approval set forth in (b) of this Attachment ensures that each person that successfully completes the training is adequately trained to perform his assigned duties;

   d) Whenever the DGCA finds that revisions are necessary for the continued adequacy of a training programme that has been granted final approval, the Operator shall, after notification by the DGCA, make any changes in the programme that are found necessary by the DGCA within 30 days after receiving such notice.
3) **Training programme: Approval of aircraft simulators and other training devices.**

a) Each aircraft simulator and other training devices that are used in a training course must:
   i) Be specifically approved for:
      1. The Operator;
      2. The type of aircraft and, if applicable, the particular variation within a type, for which the training or check is being conducted; and
      3. The particular maneuver, procedure, or Crew Member function involved.
   ii) Maintain the performance, function, and other characteristics that are required for approval;
   iii) Be modified to conform with any modification to the aircraft being simulated that results in changes to performance, function, or other characteristics required for approval;
   iv) Be given a daily functional pre-flight check before being used;
   v) Have a daily discrepancy log kept with each discrepancy entered in that log by the appropriate Instructor or DGCA Inspector at the end of each training or check flight.

b) A particular aircraft simulator or other training device may be approved for use by more than one Operator.

c) An aircraft simulator may be used instead of the aircraft to satisfy the in-flight requirements, if the simulator:
   i) Is approved under this section and meets the appropriate simulator requirements.
   ii) Is used as part of an approved programme that meets the training requirements.

d) An aircraft simulator approved under this Part must be used instead of the aircraft to satisfy the flight crew specific training requirements such as:
   i) Low level wind shear, and in-flight turbulence;
   ii) Low Visibility Operations (LVOPS);
   iii) Controlled Flight Into Terrain (CFIT);
   iv) Traffic Collision and Avoidance System or Airborne Collision Avoidance System (TCAS/ACAS)
   v) Extended Twin Engine Operations (ETOPS).

4) **Training courses using aircraft simulators and other training devices.**

A course of training in aircraft simulators and other training devices shall be included in the Operator's approved training programme for use as provided in this Attachment if that course:

a) Provides sufficient hours of training at the pilot controls of an aircraft simulator as well as a proper briefing before and after the training.

b) Provides training in at least the procedures and manoeuvres set forth in Attachment A to this Part, or

c) Provides line-oriented flight training (LOFT) that:
   i) Utilizes a normal flight crew complement;
   ii) Includes at least the manoeuvres and procedures (abnormal and emergency) that may be expected in line operations;
   iii) Is representative of the flight segment appropriate to the operations being conducted by the Operator; and
   iv) Is given by a qualified Instructor.
ATTACHMENT ‘F’ – FLYING TRAINING ORGANIZATIONS CERTIFICATES

Procedures for the Issuance and Renewal of Flying Training Organizations Certificates

1. Introduction

A Flying Training Organization (FTO) is an organization staffed, equipped and operated in a suitable environment offering flying training, and/or synthetic flight instruction and/or theoretical knowledge instruction for specific aviation training programs.

2. Purpose

This Attachment ‘F’ of KCASR’s Part - I – Personnel Licensing provides guidance and information to those operators or individuals who propose to apply for approval to conduct training programs for Pilots, Ground engineers and Dispatchers or any other training programs related to aviation in Kuwait. An operator of an aircraft based in Kuwait or an individual must obtain a Training Certificate and Training Specifications from DGCA Aviation Safety Department before conducting any type of training related to aviation. The procedures contained in this Attachment enable an operator or an individual to determine their capability of meeting the DGCA requirements. There is also a DGCA Inspector’s checklist for the processing of applications for setting up a training organization to ensure that applicants are fully aware of the DGCA requirements. Existing training organizations who wish to add a new type of training program to their training specifications should follow the same general process.

3. Applicability

This guidance and policy material applies to all Kuwaiti and Foreign operators and individuals who seek approvals to set up Training Organization to conduct any type of training related to aviation.

4. Policy

a) No operator or individual is permitted to conduct any type of training related to aviation without authority granted by the DGCA;

b) The initial issue of a Training Certificate in respect of an operator or individual who proposes to conduct any type of aviation related training must be authorized by DGCA;

c) The Training Organization must be considered a Kuwaiti National Company, which has commercial aviation activities approved by Kuwaiti Ministry of Commerce;

d) The proposed training activities to be conducted must be clearly defined, such as:
   i) Types of Flight Training;
   ii) Types of Ground Training (i.e. Ground Engineers, Dispatchers, Others);

e) All flight operational, managerial and airworthiness appointments, manuals, documents and facilities must be approved by the DGCA;

f) All inspections and processing will be conducted at either no cost to the DGCA or after payment of the appropriate fees.
g) A separate approval to conduct flight training activities must be obtained from the applicable DGCA Department for the intended aerodrome(s) of operation;

h) All other required approvals shall be obtained prior to DGCA processing of an application.

i) Ownership of the training aircraft must be legally established for inclusion on the Certificate of Registration;

j) Unless specifically authorized by DGCA, holders of a Kuwait Training Certificate shall not permit the use of their call sign or ICAO designated code to any other operator or training organization;

k) Maintenance organizations in Kuwait that are to be contracted with for the maintenance of the flight training organization’s aircraft must be approved by DGCA. Any organization supporting a Kuwait registered aircraft or authorized operators shall be required to become a Kuwait Approved Maintenance Organization.

5. References

The Training Organizations’ approvals policy in this Attachment is based on the existing referenced documents authorized by DGCA. The main references used are:

a) KUWAIT Civil Aviation Regulations (KCASR's) Part - I - Personnel Licensing;

b) KUWAIT Civil Aviation Regulations (KCASR's) Part – 6, Attachment AA;

c) UAE CAAP 33 (Issue May 2008);

d) Joint Aviation Regulations (JAR FCL 1.055 & Relevant Appendices);

e) Federal Aviation Regulations (FARs);

f) International Civil Aviation Organization (ICAO);

g) ICAO Doc. 9841 – Manual on the Approval of Flight Crew Training Organizations;

h) ICAO Annex 1, Appendix 2.

6. Overview

The initial issue of a Flight Training Organization’s Certificate to an applicant takes place in five distinct phases:

a) Pre-application Phase;

b) Formal application;

c) Document evaluation;

d) Inspection and proving training flights;

e) Certification.

7. Pre-Application Phase

7.1 General

The pre-application phase occurs when the applicant meets with DGCA/ASD Director and discusses generally his initial plans and the viability of different proposals. The applicant should contact DGCA/ASD office and bring a pre-application statement of intent to this meeting regarding the proposed operations and types of training and sequence of events. The arrangement for the pre-application meeting is made by contacting the DGCA/ASD Director Office, Tel. (+965) 24342492 - 24765815 / Fax. (+965) 24765796, Email: safety@dgca.gov.kw. This meeting is to be requested when details of the training operations / activities are known.
7.2 Pre-application Statement of Intent

The pre-application Statement of Intent is reviewed by DGCA/ASD Director and this statement should be in the form of a letter from the owner and / or sponsor. It should contain at least the following information:

a) Types of Training;
b) Type(s) of aircraft (as applicable);
c) Proposed areas for flight training (as applicable);
d) Nature of aircraft (owned or leased) (as applicable);
e) Location of main base of training and other facilities;
f) Qualifications of Training and Maintenance key management personnel;
g) Proposed training organization name and corporate body Sponsor;
h) Approximate date of commencement.

7.3 Process

On the basis of information provided during this phase, the DGCA/ASD will provide the applicant with the following information:

a) Application procedures;
b) Documents required;
c) General operating and airworthiness advices;
d) Approval requirements from other government authorities;
e) Regulator feasibility;
f) DGCA Fees.

8. Formal Application Phase

8.1 General

The application process cannot commence unless the DGCA/ASD Director gives his approval to proceed. Based on the information provided, a preliminary assessment will be made to ensure that the proposed training activities / operations are in the national interest. This could take up to 30 days. The formal application phase commences when the applicant lodges a formal application for a Training Certificate, accompanied by various documents intended to prove or describe the manner in which he intends to conduct the training and the DGCA makes formal assessment of the degree of completeness of the applicant’s proposal. The formal application Form must be submitted to the DGCA at least 90 days prior to the commencement date of the training activities/operations. The Operations Manual of the training organization may be submitted later but not less than 60 days before the date of intended training operations.

The application for the renewal of a Training Certificate must be submitted at least 30 days, or otherwise agreed, before the end of the existing period of validity of the Training Certificate. The DGCA must be given at least 10 days prior notice of a proposed change of a nominated post holder of the training organization such as the Head of Training, Chief Flying Instructor, the Chief Ground Instructor and the Director / Head of Maintenance. Submission of the formal application is associated with a meeting attended by the Accountable Manager, nominated post holders or key personnel from both the applicant and the DGCA.
The formal application must be signed by the corporate body or national sponsor. An accompanying letter shall include the full name and address of the applicant and contact numbers for the applicant’s agent or coordinator. The letter must contain particulars of the proposed operations / training including details of desired training areas to confirm the pre-application information.

During the meeting associated with the lodging of the formal application, the DGCA/ASD Director will nominate the assigned Inspector who will be available to meet with the applicant’s technical management and representatives to develop an action plan and to ensure the application proceeds in a timely manner. The formal application letter must be accompanied by:

a) Required documentation;
b) Schedule of events, including personnel training;
c) Manuals.
d) Compliance statement;
e) Completed Licensing Form (Management Qualifications);
f) Aircraft (as applicable), facility and services information;
g) Proof of adequate financial funds to support the proposed Training organization’s project;
h) Organization’s structure.

8.2 Documentation

The following documents should accompany the formal application:

a) Passport copy of owner (of corporate body) or national sponsor;
b) Kuwaiti Ministry of Commerce Approval;
c) Aircraft and/or equipments ownership details and/or lease arrangements;
d) Aircraft Insurance copies (as applicable);
e) Bank statements or letter of credit.

8.3 Schedule of Events

The Schedule of Events is a list of items, activities, aircraft, and / or facility acquisitions, which the applicant must accomplish or make ready, and the proposed dates on which they will be ready for DGCA inspection. The list should include, but is not limited to the following and the dates at which they will take place:

a) When facilities will be ready for DGCA inspection;
b) When aircraft and/or equipments will be ready for DGCA inspection;
c) C of A & C of R requirements (as applicable);
d) Maintenance, Ground handling and Dispatch staff (as applicable);
e) When proving training flights will begin (as applicable);
f) When proposed training operations will begin.

8.4 Manuals

The following manuals, where applicable, must accompany the formal application:
a) Operations Manual (This manual may also include the Quality System Operations and the Safety and Security Program);
b) Training Manual;
c) Quality Manual – Maintenance & Operations (as applicable);
d) Aircraft Flight Manuals – type related (as applicable);
e) MEL (Minimum Equipment List and since Single Engine aircraft do not have a MEL, a brief minimum operating equipment list may be designed from the AFM) (as applicable);
f) Aviation Safety Program (This may be incorporated in the Operations Manual).

8.5 Management Qualifications Resumes

8.5.1 General

For a Flight Training Organization, the applicable Form is to be completed and to include a brief resume containing information on the individual’s qualifications, certificates, ratings and experience of personnel selected for the following or equivalent positions. For small organizations of less than 20 personnel, if there is sufficient justification, the DGCA may consider the Head of Training to hold another position. Applicants are advised that a lack of technical management appointments during the application process will delay the approval process. The DGCA will assess the applicant’s qualifications and experience as well as their managerial ability. The DGCA must be given at least 15 days prior notice of a proposed change of nominated key personnel.

The following are the posts that must be accepted and approved by the DGCA:

a) Accountable Manager;
b) Head of Training (HOT);
c) Chief Flying Instructor (CFI) (as applicable);
d) Chief Ground Instructor (CGI);
e) Director /Head of Maintenance (DM) (as applicable);
f) Quality Assurance Manager (QAM – Maintenance & Operations);

For modular training courses, these positions may be combined and filled by one or two persons depending on the scope of training. As an example, the Head of Training may also be appointed as Chief Flight Instructor. In a Training Organization conducting only Theoretical Subjects, the Head of Training may also be appointed as Chief Ground Instructors.

Applicants must ensure that only qualified, experienced and trained personnel to be appointed for the above mentioned positions. Their names are to be submitted to the DGCA for consideration and approval.

8.5.2 Expected qualifications and Level of Experience

The qualifications and level of experience of key personnel will vary according to the scope and size of proposed training operations and as a guide the following expectations would exist in respect of technical staff employed by a flight training Organization:
(a) **Head of Training (HOT)**

The Head of Training (HOT) shall have overall responsibility for ensuring satisfactory integration of flying training, synthetic flight training and theoretical knowledge instruction, and for supervising the progress of individual students. The Head of Training (HOT) shall have had extensive experience in training as a flight instructor for professional pilot licenses and possess a sound managerial capability. The HOT shall hold or have held in the three years prior to the first appointment as a HOT, a professional pilot license and rating(s) issued in accordance with the KUWAIT Civil Aviation Regulations (KCASR's) Part 1 – Personnel Licensing.

(b) **Chief Flying Instructor (CFI)**

The Chief Flying Instructor (CFI) shall be responsible for the supervision of flight and synthetic flight instructors and for the standardization of all flight instruction and synthetic flight instruction. The CFI shall:

i) Hold the highest professional pilot license related to the flying training courses conducted;

ii) Hold the rating(s) related to the flying training courses conducted;

iii) Hold a flight instructor rating for at least one of the types of the aircraft used on the course; and

iv) Have completed 1000 hours pilot-in-command of which a minimum of 500 hours shall be on flying duties related to the flying courses conducted of which 200 hours may be instrument ground time.

(c) **Chief Ground Instructor (CGI)**

The Chief Ground Instructor (CGI) shall be responsible for the supervision of all ground instructors and for the standardization of all theoretical knowledge instruction. The CGI shall have a practical background in aviation and have undergone a course of training in instructional techniques or have had extensive previous experience in giving theoretical knowledge instruction.

(d) **Flying Instructors, other than Synthetic Flight Instructors**

Flying Instructors shall hold:

i) A professional pilot license and rating related to the flying training courses that they appointed to conduct;

ii) An instructor rating relevant to the part of the course being conducted, e.g. instrument rating instructor, flight instructor, type / class rating instructor, as appropriate; or

iii) An authorization from the DGCA to conduct specific training in a Flight Training Organization;

iv) The maximum flying hours, maximum flying duty hours and minimum rest time between instructional duties of instructors shall be acceptable to the DGCA, with to refer to KCASR's Part 6 Attachment "Q".

(e) **Instructors for Synthetic Flight Training**

a) For flight training on a FTD (Flight Training Device) and a FNPT 1 (Flight Navigation Procedures Training Device) Type 1, Instructors shall hold or have held 3 years prior to the first appointment, a professional pilot license and rating(s), except for instructors having an authorization according to KCASR’s Part 1- Personnel Licensing, appropriate to the training courses they are appointed to conduct, and have had instructional training experience.
b) For flight training duties on a flight simulator and / or FNPT II, instructors shall hold:
   1. a Flight Instructor (A) FI (A), Instrument Rating Instructor (A) IRI (A), Type Rating Instructor (A) TRI (A); or
   2. Class Rating Instructor (A) CRI (A) rating; or
   3. a SFI (A) (Simulator Flight Instructor (A); or
   4. STI (A) (Synthetic Training Instructor (A); or
   5. MCCI (A) (Multi Crew Co-operation Instructor (A) authorization relevant to the course the instructor is conducting.

(f) Theoretical Knowledge Instructors / Ground Instructors

Theoretical Knowledge Instructors / Ground Instructors in license and ratings examination subjects shall have appropriate experience in aviation and shall, before appointment, give proof of their competence by giving a test lecture based on material they have developed for the subjects that they are to teach.

(g) Director / Head of Maintenance

The Director/Head of Maintenance is responsible for the overall maintenance activities and works related to the training aircraft used by the flight training organization. He is also responsible for the co-ordination of the selection of aircraft and aircraft equipments, spare parts and technical standards related to new aircraft. He is also responsible for communicating with the contracted maintenance and repair agencies with regard to any matters related to maintenance and repair of aircraft on behalf of the Flight training organization. He also ensures the establishment of a Quality System that promotes the highest standards of airworthiness and effectiveness of the overall maintenance program.

The nominated key personnel for this position should have the following:

i) Relevant engineering degree or aircraft maintenance technician with additional qualifications acceptable to the DGCA. Relevant engineering degree means an engineering degree from aeronautical, mechanical, electrical, electronic, avionic or other studies relevant to the maintenance of aircraft / aircraft components;

ii) Thorough familiarity with the Organization’s Maintenance Management Exposition;

iii) Knowledge of the relevant type(s) of aircraft;

iv) Knowledge of maintenance methods.

It is also preferable that the Director / Head of Maintenance meet the following qualifications:

i) Hold an Aircraft Maintenance Engineers’ License (LAME) with Airframe and Power plant ratings for the type of aircraft to be used by the flight training organization with a minimum of 2-3 years of experience;

ii) Have at least 1 (One) year of experience in a position responsible for returning aircraft to service;

iii) Have at least 1 (One) year of experience in a supervisory capacity maintaining the same category and class of aircraft to be used by the flight training organization.
8.6 Aircraft, Facilities and Services

8.6.1 General

The Aircraft, Facilities and Services details must be provided as an attachment to the formal application to provide evidence that the applicant will have available aircraft, facilities and support services to conduct the type of operations proposed. The evidence may be in the form of proof of purchase, formal contracts, or lease agreements. If formal purchase, lease or contract agreements have not been completed, letters showing agreements between the contracting parties will suffice until formal contracts or agreements are available. Aircraft ownership details of the insurance of the aircraft must be authenticated. Documents showing details of the insurance of the aircraft, its occupants and third parties liabilities are also required.

8.6.2 Aircraft Equipment

Aircraft equipment shall meet (KCASR's) Part 6, Subpart 2 - Chapter 6 requirements.

9. Document Evaluation Phase

9.1 General

The document evaluation phase involves detailed study of the manuals and other documents, which accompanied the formal application, for content and compliance. This study of the procedures and contents of these documents gives the DGCA a preliminary assessment of the candidate’s technical fitness and operators are reminded to submit professional documents, which reflect their operation and aircraft. The set of documents and manuals should be complete and the detailed evaluation of them must satisfy the DGCA’s requirements before the inspection phase can begin. The inspection phase may reveal the need for some operational changes, which in turn make it necessary for the applicant to amend the documents originally submitted. In that case, it is conceivable that some form of documents evaluation may continue until shortly before certification. Nevertheless, the satisfactory evaluation of the documents as originally submitted is a prerequisite for the inspection phase to begin. The DGCA will review the list of documents and manuals ensuring adequacy and compliance for the type of operation proposed by the operator. The documents and manuals should be presented for consideration not less than 90 days prior to the commencement of the proposed operations to avoid delay. It is only at this stage when the DGCA has all required documents, that the proposed operator will be advised as to the time the application process will take. Operators are reminded that incomplete documentation will affect the application completion date.

9.2 Operations and Training Manuals

A Flight Training Organization shall prepare and maintain an Operations Manual and a Training Manual containing information and instructions to enable staff to perform their duties and to give guidance to students on how to comply with course requirements. A Flight Training Organization shall make available to staff and, where appropriate, to students the information contained in the Operations Manual, the Training Manual and the FTO’s approved documentation. The amendment procedure shall be stated and amendments properly controlled.
9.2.1 Operations Manual

The Operations Manual shall provide relevant information to particular group of staff, e.g. Flight Instructors (FIs), Synthetic Flight Instructors (SFI), Ground Instructors, Operations and Maintenance staff, etc. and shall include basically the following:

a) General;
b) Technical, Aircraft Type Related;
c) Routes and Aerodromes;
d) Staff Training.

*Note:* Guidance material to design training programmes to develop knowledge and skills in human performance can be found in the Human Factors Training Manual (ICAO Doc 9683)

9.2.2 Training Manual

The training organization shall provide a training and procedures manual for the use and guidance of personnel concerned. This manual may be issued in separate parts and shall contain at least the following information:

a) a general description of the scope of training authorized under the organization’s terms of approval;
b) the content of the training programmes offered including the courseware and equipment to be used;
c) a description of the organization’s quality assurance system in accordance with Paragraph 9.4;
d) a description of the organization facilities;
e) the name, duties and qualification of the person designated as responsible for compliance with the requirements;
f) a description of the duties and qualification of the personnel designated as responsible for planning, performing and supervising the training in Paragraph 8.5.2(a);
g) a description of the procedures used to establish and maintain the competence of instructional personnel;
h) a description of the method used for completion and retention of the training records required by Paragraph 11;
i) a description, when applicable, of additional training needed to comply with an operator’s procedures and requirements; and
j) a description of the selection, role and duties of the authorized personnel, as well as the applicable requirements established by the DGCA.

The Training Manual shall state the standards, objectives and training goals for each phase of training that the students are required to comply with and shall include the following:

Part 1 - The Training Plan;
Part 2 - Briefing and Air Exercises (Training Format);
Part 3 - Synthetic Flight Training;
Part 4 – Theoretical Knowledge Instruction.

9.2.3 The training organization shall ensure that the training and procedures manual is amended as necessary to keep the information contained therein up to date.
9.2.4 Copies of all amendments to the training and procedures manual shall be furnished promptly to DGCA and all organization's persons to whom the manual has been issued.


Refer to Civil Aviation Regulations (KCASR’s) Part 145 requirements. Specific information may be obtained from DGCA/ASD Airworthiness Section.

9.4 Quality Assurance System

The Training Organization shall establish a quality assurance system acceptable to the DGCA which ensures that training and instructional practices are in compliance with all relevant requirements.

10. Inspection Phase

10.1 General

The inspection phase is the phase in which the physical facilities and equipments proposed for use by the applicant are assessed for acceptability. The personnel that requires specific approval (e.g. Head of Training and Chief Flight Instructor) will be assessed. The applicant must satisfy the DGCA that sufficient qualified personnel are employed and that such personnel are employed on a full time basis where appropriate. Amongst other requirements, the applicant shall provide adequate facilities and equipments sufficient to permit the staff to carry out their duties related to the conduct of training in compliance with the regulations and manuals. During this phase, the DGCA Inspectors (Operations and Airworthiness) will conduct internal coordination meetings to ensure that the application process develops in a timely manner.

Synthetic training devices shall be qualified according to requirements established by Acceptable Authority to DGCA; and their use shall be approved by DGCA to ensure that they are appropriate to the task.

10.2 Inspection

The following is the scope of inspection to be adopted by the DGCA for the applicant’s / operator’s information:

10.2.1 Management and Administration Structure:

a) status of the organization’s management;
b) qualifications / experience of key personnel;
c) administrative infrastructure;
d) adequacy of staff, facilities, equipment and finances;
e) office support;
f) printing and / or distribution facilities;
g) rostering;
h) rights of access by DGCA Inspectors.

10.2.2 Training Facilities:

Classrooms

a) number/size of classrooms adequate for purpose;
b) student accommodation;
c) blackboards and screens;
d) lighting, heating cooling and ventilation;
e) training aids examinations;
f) security of storage;
g) examination rooms adequate for purpose.

10.2.3 Aircraft and/or Training Devices Records:

a) Maintenance records;
b) Technical logs;
c) Maintenance programs;
d) Safety Requirements.

11. Records:

Training Organization shall maintain and retain the following records for a period of at least 5 years, using appropriate administrative staff:

a) Details of ground, flying and synthetic flight training given to individual students;
b) Detailed and regular progress reports from instructors including Assessments, and regular progress flight tests and ground examinations; and
c) Personal information, e.g. expiry dates of medical certificates, ratings, etc.;
d) The format of the student training records shall be specified in the Training Manual;
e) The Training Organization shall submit training records and reports as required by the DGCA.

12. Training Programme

A training program shall be developed for each type of course offered. This program shall include a breakdown of flying and theoretical knowledge in either a week-by-week or phase presentation, a list of standard exercises and a syllabus summary. In particular, synthetic flight training and theoretical knowledge instruction shall be phased in such a manner that students shall be able to apply to flying exercises the knowledge gained on the ground. Arrangements should be made so that problems encountered in instruction can be resolved during subsequent training. The content and subsequence of the training program shall be acceptable to the DGCA.

13. Training Aeroplanes

An adequate fleet of training aeroplanes appropriate to the courses shall be provided. Each aeroplane shall be fitted with duplicate primary flight controls for use by the instructor and the student. The fleet shall include, as appropriate to the courses of training, aeroplane(s) suitable for demonstrating stalling and spin avoidance and aeroplane(s) suitably equipped to simulate instrument meteorological conditions and suitably equipped for the instrument flight required. Only aeroplanes approved by the DGCA for training purposes shall be used.

13.1 Proving Training Flights

The requirements for Proving Training Flights will depend on the size and complexity of Training Activities. The number of flights will be solely at the discretion of the DGCA and Flight Training Organizations are advised that proving training flights may be extended to ensure training competency is achieved in all areas.
14. **Flight Operations Accommodation**

The following accommodation shall be available:

a) An operations room with facilities to control training flying operations;

b) A flight planning room with the following facilities:
   i) Appropriate current maps and charts;
   ii) Current AIS information or Aeronautical Information Publication of Kuwait;
   iii) Current meteorological information;
   iv) Communications to ATC and the operations room;
   v) Maps showing standard cross-country routes;
   vi) Maps showing current prohibited, danger and restricted areas;
   vii) Any other flight safety related material;

c) Adequate briefing room / cubicles of sufficient size and number;

d) Suitable offices for the supervisory staff and room(s) to allow flying instructors to write reports on students, complete records, etc.;

e) Furnished crew room(s) for instructors and students.

15. **Theoretical Knowledge Instruction Facilities**

The following facilities for theoretical knowledge instruction shall be available:

a) Adequate classroom accommodation for the current students;

b) Suitable demonstration equipment to support the theoretical knowledge instruction;

c) Radio-Telecommunication (R/T) training and testing facility;

d) A reference library containing publications giving coverage of the syllabus;

e) Offices for the instructional staff.

16. **Requirements for Entry to Training**

A student accepted for training shall possess the appropriate medical certificate for the license required and shall meet the entrance requirements set by the FTO, as approved by the DGCA.

17. **Certification Phase**

17.1 **General**

17.1.1 The certification phase follows the satisfactory completion of all the previous phases. It begins when the DGCA takes the necessary administrative action to actually issue a Training Certificate with associated Training Specifications. At some stage during the inspection phase it will usually become apparent that the applicant is likely to qualify for certification issue, and at that point, parts of the certification phase can commence. If the inspection phase is unsatisfactory, no further action will be taken until the deficiencies are rectified. The certification requirements of this phase are also checked during the renewal of a Training Certificate and its associated Training Specifications.

17.1.2 The approval certificate contents are:

a) organization’s name and location;

b) date of issue and period of validity;

c) terms of approval.
18. **Checklist for issue of a Training Certificate**

This section is indicative of the procedures to be followed by the DGCA in the processing of an application for the issue of a Training Certificate. Before the issuance of the Training Certificate, the DGCA Inspectors will complete the Licensing Form as a result of the work conducted during the previous phase. DGCA/ASD Licensing Form require the following items to be assessed and satisfied by the DGCA:

**Item:**

1. Preliminary Assessment – Policy;
2. Preliminary Assessment – Technical;
3. Approval of Key Personnel;
4. Statement of Compliance;
5. Training Operations Documents Compliance;
6. Contracts or Lease Agreements, Buildings and Facilities;
7. DGCA Inspectors’ inspections on facilities, training, management effectiveness, staffing, training activities/operations, operations control records, aircraft, quality system, flight safety etc.;
8. Demonstration including proving training flights;
9. Airworthiness responsibility (Airworthiness Inspector);
10. Airworthiness coordination (Airworthiness Inspector);
11. Maintenance Organization Exposition/Maintenance Management Exposition Manual (Airworthiness Inspector);
12. Pending audits/investigation;
13. Aircraft technical logs(Airworthiness Inspector);
14. Reporting of un-airworthy condition(Airworthiness Inspector);
15. Maintenance Facility inspection(Airworthiness Inspector);
16. Aircraft Inspections (Airworthiness Inspector);
17. Aircraft Maintenance records(Airworthiness Inspector);
18. Changes affecting maintenance(Airworthiness Inspector);
19. Miscellaneous such as MEL (Minimum Equipment List) or equivalent etc. (Airworthiness Inspector);
20. Safety and Security Aspects;
21. Licenses and validations;

19. **Renewal of a Training Certificate**

A Training Certificate remains valid for a period of five years, or as stated on the certificate and will only be renewed provided there is a demonstrated compliance with the regulations applicable to this Attachment F and other relevant KCASR’s requirements.

20. **Oversight**

Kuwait DGCA, with an effective oversight programme, shall ensure the training organization’s continued compliance with the approval requirements.

21. **Evaluation and checking**

When Kuwait DGCA has authorized an approved training organization to conduct the testing required for the issuance of a licence, certificate, or rating, the testing shall be conducted by the personnel authorized by DGCA or designated by the Training organization in accordance with criteria approved by DGCA.