

**IMPLEMENTING STANDARD 1**  
***Civil Aviation (GENERAL APPLICATION AND PERSONNEL LICENSING)***  
***Regulations 2007 Implementing Standards***

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**IMPLEMENTING STANDARD 1**  
***Civil Aviation (GENERAL APPLICATION AND PERSONNEL LICENSING)***  
***Regulations 2007***

***Standard NO: 1.1 EXEMPTION FROM HOLDING CURRENT MEDICAL CERTIFICATE***  
***(PART A Section 1)***  
***Regulation 5(5)***

A person is not required to hold a current and appropriate medical certificate required if that person—

- (a) is exercising the privileges of a ground instructor authorization;
- (b) is operating an aircraft within a foreign country using a pilot licence issued by that country and possesses evidence of current medical qualification for that licence;
- (c) is operating an aircraft with a pilot licence, issued by the Director on the basis of a foreign pilot licence and holds a current medical certificate issued by the country that issued the pilot licence; or
- (d) is taking a test or check for a licence, rating or authorization conducted under an approved course by an Approved Training Organization.

**Standard NO: 1.2 VOLUNTARY SURRENDER OF LICENCE**

**Regulation 15(2)**

“I..... voluntarily surrender my licence for my own  
(State name)  
reasons, with full knowledge that my.....  
(insert name of licence or rating, as appropriate)  
may not be reissued to me unless I again pass the tests prescribed for its issuance.

.....  
(Signature of licensee).”



### **Standard NO. 1.3 TRAINING REQUIREMENTS FOR STUDENT PILOTS**

A student pilot who is receiving training for solo flight shall receive and log flight training for the following manoeuvres and procedures, as applicable for each category and class rating.

*Note: When (SE) is indicated, the item is only for single engine aircraft. When (ME) is indicated, the item is only for multi-engine aircraft.*

#### **Standard NO. 1.3.1**

##### **Regulations 27(4), 27(5) and 29(2)(a)(c)**

##### ***SPL Manoeuvres And Procedures For Pre-Solo Flight Training—Aeroplane Category***

A student pilot who is receiving training for solo flight in an aeroplane shall receive and log flight training for the following manoeuvres and procedures:

- (1) Proper flight preparation procedures, including preflight planning and preparation, powerplant operation and aircraft systems.
- (2) Taxiing, or surface operations, including runups.
- (3) Takeoffs and landings, including normal and crosswind.
- (4) Straight and level flight and turns in both directions.
- (5) Climbs and climbing turns.
- (6) Aerodrome traffic patterns including entry and departure procedures.
- (7) Collision avoidance, windshear avoidance and wake turbulence avoidance.
- (8) Descents, with and without turns, using high and low drag configurations.
- (9) Flight at various airspeeds from cruise to slow flight.
- (10) Stall entries from various flight attitudes and power combinations with recovery initiated at the first indication of a stall and recovery from a full stall.
- (11) Emergency procedures and equipment malfunctions.
- (12) Ground reference manoeuvres.
- (13) Approaches to a landing area with simulated engine malfunctions.
- (14) Slips to a landing (SE only).
- (15) Go-arounds.

#### **Standard NO. 1.3.2**

##### **Regulations 27(4), 27(5) and 29(2)(a)(c)**

##### ***SPL Manoeuvres And Procedures For Pre-Solo Flight Training—Helicopter Category***

A student pilot who is receiving training for solo flight in a helicopter shall receive and log flight training for the following manoeuvres and procedures:

- (1) Proper flight preparation procedures, including preflight planning and preparation, powerplant operation and aircraft systems.
- (2) Taxiing, or surface operations, including runups.

- (3) Takeoffs and landings, including normal and crosswind.
- (4) Straight and level flight and turns in both directions.
- (5) Climbs and climbing turns.
- (6) Aerodrome traffic patterns including entry and departure procedures.
- (7) Collision avoidance, windshear avoidance and wake turbulence avoidance.
- (8) Descents, with and without turns, using high and low drag configurations.
- (9) Flight at various airspeeds.
- (10) Emergency procedures and equipment malfunctions.
- (11) Ground reference manoeuvres.
- (12) Approaches to the landing area.
- (13) Hovering and hovering turns.
- (14) Go-arounds.
- (15) Simulated emergency procedures, including autorotational descents with a power recovery and power recovery to hover.
- (16) Rapid decelerations.
- (17) Simulated one-engine-inoperative approaches and landings for multi-engine helicopters (ME).

**Standard NO. 1.3.3**

**Regulations 27(4), 27(5) and 29(2)(a)(c)**

***SPL Manoeuvres And Procedures For Pre-Solo Flight Training—Powered-Lift Category***

A student pilot who is receiving training for solo flight in a powered-lift shall receive and log flight training for the following manoeuvres and procedures:

- (a) Proper flight preparation procedures, including preflight planning and preparation, powerplant operation and aircraft systems.
- (b) Taxiing, or surface operations, including runups.
- (c) Takeoffs and landings, including normal and crosswind.
- (d) Straight and level flight and turns in both directions.
- (e) Climbs and climbing turns.
- (f) Aerodrome traffic patterns including entry and departure procedures.
- (g) Collision avoidance, windshear avoidance and wake turbulence avoidance.
- (h) Descents, with and without turn.
- (i) Flight at various airspeeds from cruise to slow flight.
- (j) Stall entries from various flight attitudes and power combinations with recovery initiated at the first indication of a stall, and recovery from a full stall.

- (k) Emergency procedures and equipment malfunctions.
- (l) Ground reference manoeuvres.
- (m) Approaches to a landing area with simulated engine failure.
- (n) Go-arounds.
- (o) Approaches to the landing area.
- (p) Hovering and hovering turns.
- (q) Simulated one-engine-inoperative approaches and landings for multi-engine powered-lift (ME).

**Standard NO. 1.3.4**

**Regulation 27(4), 27(5) and 29(2)(a)(c)**

***SPL Manoeuvres And Procedures For Pre-Solo Flight Training—Airship Category***

A student pilot who is receiving training for solo flight in an airship shall receive and log flight training for the following manoeuvres and procedures:

- (a) Proper flight preparation procedures, including preflight planning and preparation, powerplant operation and aircraft systems.
- (b) Taxiing, or surface operations, including runups.
- (c) Takeoffs and landings, including normal and crosswind.
- (d) Straight and level flight and turns in both directions.
- (e) Climbs and climbing turns.
- (f) Aerodrome traffic patterns including entry and departure procedures.
- (g) Collision avoidance, windshear avoidance and wake turbulence avoidance.
- (h) Descents, with and without turn.
- (i) Flight at various airspeeds from cruise to slow flight.
- (j) Emergency procedures and equipment malfunctions.
- (k) Ground reference manoeuvres.
- (l) Rigging, ballasting, and controlling pressure in the ballonets, and superheating.
- (m) Landings with positive and with negative static trim.

**Standard NO. 1.3.5**

**Regulation 27(4) , 27(5) and 29(2)(a)(c)**

***SPL Manoeuvres And Procedures For Pre-Solo Flight Training—Balloon***

A student pilot who is receiving training for solo flight in a balloon shall receive and log flight training for the following manoeuvres and procedures:

- (a) Layout and assembly procedures;

- (b) Proper flight preparation procedures, including preflight planning and preparation, and aircraft systems;
- (c) Ascents and descents;
- (d) Landing and recovery procedures;
- (e) Emergency procedures and equipment malfunctions;
- (f) Operation of hot air or gas source, ballast, valves, vents, and rip panels as appropriate;
- (g) Use of deflation valves or rip panels for simulating an emergency;
- (h) The effects of wind on climb and approach angles; and
- (i) Obstruction detection and avoidance techniques.

**Standard NO. 1.3.6**

**Regulation 27(4), 27(5) and 29(2)(a)(c)**

***SPL Manoeuvres And Procedures For Pre-Solo Flight Training—Glider***

A student pilot who is receiving training for solo flight in a glider shall receive and log flight training for the following manoeuvres and procedures:

- (a) Proper flight preparation procedures, including preflight planning and preparation, aircraft systems, and is applicable, powerplant operations;
- (b) Taxiing or surface operations, including runups, if applicable;
- (c) Launches, including normal and crosswind;
- (d) Straight and level flight, and turns in both directions, if applicable;
- (e) Aerodrome traffic patterns, including entry procedures;
- (f) Collision avoidance, windshear avoidance, and wake turbulence avoidance;
- (g) Descents with and without turns using high and low drag configurations;
- (h) Flight at various airspeeds;
- (i) Emergency procedures and equipment malfunctions;
- (j) Ground reference manoeuvres;
- (k) Inspection of towline rigging and review of signals and release procedures, if applicable;
- (l) Aerotow, ground tow, or self-launch procedures;
- (m) Procedures for disassembly and assembly of the glider;
- (n) Stall entry, stall, and stall recovery;
- (o) Straight glides, turns, and spirals;
- (p) Landings, including normal and crosswind;
- (q) Slips to a landing;

- (r) Procedures and techniques for thermalling; and
- (s) Emergency operations, including towline break procedures.

**Standard NO. 1.3.7**

**Regulation 29(2)(b)**

***Manoeuvres And Procedures For Student Pilot Receiving Training For Cross-Country Flight Training***

The following are the manoeuvres and procedures for student pilot who is receiving training for cross-country flight training:

In an aeroplane or rotorcraft—

- (a) use of aeronautical charts the Visual Flight Rules navigation using pilotage and dead reckoning with the aid of a magnetic compass;
- (b) use of aircraft performance charts pertaining to cross-country flight;
- (c) procurement and analysis of aeronautical weather reports and forecasts, including recognition of critical weather situations and estimating visibility while in flight;
- (d) recognition, avoidance, and operational restrictions of hazardous terrain features in the geographical area where the student pilot will conduct cross-country flight;
- (e) use of radios for Visual Flight Rules navigation and two-way communications;
- (f) climbs at best angle and best rate; and
- (g) control and manoeuvring solely by reference to flight instruments, including straight and level flight, turns, descents, climbs, use of radio aids and Air Traffic Control directives;

In a powered-lift—

- (a) those specified in paragraph (a)(i), as applicable; and
- (b) takeoff, approach, and landing procedures that include high-altitude, steep, and shallow take-offs, approaches, and landings;

In a glider—

- (a) those specified in paragraph (a)(1), as applicable;
- (b) landings accomplished without the use of the altimeter from at least 2,000 feet above the surface; and
- (c) recognition of weather and upper air conditions favourable for cross-country soaring, ascending flight, descending flight, and altitude control;

In an airship—

- (a) those specified in paragraph (a)(i), as applicable; and
- (b) control of air pressure with regard to ascending and descending flight and altitude control;
- (c) control of the airship solely by reference to flight instruments; and

- (d) recognition of weather and upper air conditions conducive for the direction of cross-country flight.

**Standard NO: 1.4 HUMAN PHYSIOLOGY OF FLIGHT TRAINING REQUIREMENTS FOR APPLICANTS FOR PILOT LICENCES**

***Regulation 30(1)(i), 39(1)(j), and 57(1)(i)***

Applicants for Pilot Licences under regulations 30(1)(i), 39(1)(j) and 57(1)(i) shall receive training in the following areas in respect of the human physiology of flight:

- (a) high-altitude aerodynamics and meteorology;
- (b) respiration;
- (c) effects, symptoms, and causes of hypoxia and any other high-altitude sickness;
- (d) duration of consciousness without supplemental oxygen;
- (e) effects of prolonged usage of supplemental oxygen;
- (f) causes and effects of gas expansion and gas bubble formation;
- (g) preventive measures for eliminating gas expansion, gas bubble formation and high-altitude sickness;
- (h) physical phenomena and incidents of decompression; and
- (i) any other physiological aspects of high-altitude flight.

**Standard NO:1.5 – Glider and Balloon Pilot Licence Requirements**  
**Regulation 30(2)and 34(9)(b)**

***Glider Pilot Requirements***

**Knowledge Requirements**

1. The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a glider pilot licence, in at least the following subjects:

*Air law*

- (a) rules and regulations relevant to the holder of a glider pilot licence; 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, planning and loading*

- (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 *enroute* flight planning appropriate to operations under Visual Flight Rules; 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;

*Meteorology*

- (h) application of elementary aeronautical meteorology, use of, and procedures for obtaining meteorological information;
- (i) altimetry;

*Navigation*

- (j) practical aspects of air navigation and dead-reckoning techniques; use of aeronautical charts;
- (k) use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;
- (l) different launch methods and associated procedures;
- (m) appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather, wake turbulence and other operating hazards;

*Principles of flight*



- (n) principles of flight relating to gliders;
- (o) communication procedures and phraseology as appropriate to Visual Flight Rules operations and on action to be taken in case of communication failure;

### **Operational Experience**

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

3. When the applicant has flight time as a pilot of aeroplanes, the Director shall determine whether such experience is acceptable and, if so, the extent to which the flight time requirements of paragraph 2 can be reduced;

4. 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 crosswind launches, approaches and landings;
- (h) cross-country flying using visual reference and dead reckoning;
- (i) emergency procedures.

5 The applicant shall have demonstrated the ability to perform as pilot in command of a glider, the procedures and manoeuvres described in paragraph 3 with a degree of competency appropriate to the privileges granted to the holder of a glider pilot licence, and to –

- (a) recognize and manage threats and errors;
- (b) operate the glider within its limitations;
- (c) complete all manoeuvres with smoothness and accuracy;
- (d) exercise good judgement 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 manoeuvre is assured;

6. The flight instruction and skill test for the glider pilot licence shall include at least the following areas of operation with CRM competencies applied and evident in all tasks:

- (1) Preflight preparation, including the applicant's knowledge and performance of the following tasks—
  - (i) Licences and documents.
  - (ii) Weather information.
  - (iii) Operation of systems.
  - (iv) Performance and limitations.
  - (v) Aeromedical factors.
- (2) Preflight procedures, including the applicant's knowledge and performance of the following tasks—
  - (i) Assembly.
  - (ii) Ground handling.
  - (iii) Preflight inspection.
  - (iv) Cockpit management.
  - (v) Visual signals.
- (3) Aerodrome and gliderport operations, including the applicant's knowledge and performance of the following tasks—
  - (i) Radio communications.
  - (ii) Traffic patterns.
  - (iii) Aerodrome, runway, and taxiway signs, markings, and lighting.
- (4) Launches— aero tow, including the applicant's knowledge and performance of the following tasks:
  - (i) Before takeoff checks.
  - (ii) Normal and crosswind takeoff.
  - (iii) Maintaining tow positions.
  - (iv) Slack line.
  - (v) Boxing the wake.
  - (vi) Tow release.
  - (vii) Abnormal occurrences.
- (5) Launches— ground tow, including the applicant's knowledge and performance of the following tasks—
  - (i) Before takeoff check.
  - (ii) Normal and crosswind takeoff.
  - (iii) Abnormal occurrences.

- (6) Launches— self-launch, including the applicant’s knowledge and performance of the following tasks—
- (i) Engine starting.
  - (ii) Taxiing.
  - (iii) Before takeoff check.
  - (iv) Normal and crosswind takeoff and climb.
  - (v) Engine shutdown in flight.
  - (vi) Abnormal occurrences.
- (7) Landings, including the applicant’s knowledge and performance of the following tasks—
- (i) Normal and cross wind landing.
  - (ii) Slips to landing.
  - (iii) Downwind landing.
- (8) Performance airspeeds, including the applicant’s knowledge and performance of the following tasks—
- (i) Minimum sink airspeed.
  - (ii) Speed-to-fly.
- (9) Soaring techniques, including the applicant’s knowledge and performance of the following tasks—
- (i) Thermal soaring.
  - (ii) Ridge and slope soaring.
  - (iii) Wave soaring.
- (10) Performance manoeuvres, including the applicant’s knowledge and performance of the following tasks—
- (i) Straight glides.
  - (ii) Turns to headings.
  - (iii) Steep turns.
- (11) Navigation, including the applicant’s knowledge and performance of the following tasks—
- (i) Flight preparation and planning.
  - (ii) National airspace system.
- (12) Slow flight and stalls, including the applicant’s knowledge and performance of the following tasks—
- (i) Manoeuvring at minimum control airspeed.
  - (ii) Stall recognition and recovery.

(13) Emergency operations, including the applicant's knowledge and performance of the following tasks—

- (i) Simulated off-airport landing.
- (ii) Emergency equipment and survival gear.

(14) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—

- (i) After-landing and securing.

### **Free Balloon Pilot Licence**

1. Requirements for the issue of the Free Balloon Pilot Licence are as follows:

- (a) the applicant shall be not less than 16 years of age;
- (b) the applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a free balloon pilot licence, in at least the following subjects:

#### *Air law*

- (i) rules and regulations relevant to the holder of a free balloon pilot licence; rules of the air; appropriate air traffic services practices and procedures;

#### *Aircraft general knowledge*

- (ii) principles of operation of free balloon systems and instruments;
- (iii) operating limitations of free balloons, relevant operational information from the flight manual or other appropriate document;
- (iv) physical properties and practical application of gases used in free balloons;

#### *Flight performance, planning and loading*

- (iv) effects of loading on flight characteristics; mass calculations;
- (vi) use and practical application of launching, landing and other performance data, including the effect of temperature;
- (vii) pre-flight and en-route flight planning appropriate to operations under Visual Flight Rules; appropriate air traffic services procedures; altimeter setting procedures; operations in areas of high-density traffic;

#### *Human performance*

- (viii) human performance relevant to the free balloon pilot including principles of threat and error management;

### *Meteorology*

(ix) application of elementary aeronautical meteorology; use of, and procedures for obtaining, meteorological information; altimetry;

### *Navigation*

(x) practical aspects of air navigation and dead-reckoning techniques; use of aeronautical charts;

### *Operational procedures*

(xi) use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;

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

### *Principles of flight*

(xiii) principles of flight relating to free balloons;

(xiv) communication procedures and phraseology as appropriate to Visual Flight Rules operations and on action to be taken in case of communication failure;

(c) 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.

(d) the applicant shall have gained, under appropriate supervision, operational experience in free balloons in at least the following areas:

- (i) pre-flight operations, including balloon assembly, rigging, inflation, mooring and inspection;
- (ii) techniques and procedures for the launching and ascent, including appropriate limitations, emergency procedures and signals used;
- (iii) collision avoidance precautions;
- (iv) control of the free balloon by external visual reference;
- (v) recognition of, and recovery from, rapid descents;
- (vi) cross-country flying using visual reference and dead reckoning;
- (vii) approaches and landings, including ground handling; and
- (viii) emergency procedures;

(e) where the privileges of the Free Balloon Pilot Licence are to be exercised at night, the applicant shall have gained, under appropriate supervision, operational experience in free balloons in night flying;

(f) where passengers are to be carried for remuneration or hire, the holder of the Free Balloon Pilot Licence holder shall have completed not less than 35 hours of flight time including 20 hours as a pilot of a free balloon;

(g) the applicant shall have demonstrated the ability to perform as pilot in command of a free balloon, the procedures and manoeuvres described in paragraph (d) with a degree of competency appropriate to the privileges granted to the holder of a free balloon pilot licence, and to –

- (i) recognize and manage threats and errors;
- (ii) operate the free balloon within its limitations;
- (iii) complete all manoeuvres with smoothness and accuracy;
- (iv) exercise good judgement and airmanship;
- (v) apply aeronautical knowledge; and
- (vi) maintain control of the free balloon at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured; and

(h) the applicant shall hold a current Class 2 Medical Assessment.

2. (a) The privileges of the holder of a Free Balloon Pilot Licence shall be to act as pilot in command of any free balloon provided that the licence holder has operational experience in hot air or gas balloons as appropriate.

(b) Before exercising the privileges at night, the licence holder shall have complied with the requirements specified in paragraph 1(e).

3 (a) The flight instruction and skill test for the private pilot licence – balloon category shall include at least the following areas of operation with CRM competencies applied and evident in all tasks:

(1) Preflight preparation, including the applicant's knowledge and performance of the following tasks—

- (i) Certificates and documents.
- (ii) Weather information.
- (iii) Flight planning.
- (iv) National airspace system.
- (v) Performance and limitations.
- (vi) Operation of systems.
- (vii) Aeromedical factors.

(2) Preflight procedures, including the applicant's knowledge and performance of the following tasks—

- (i) Launch site selection.
- (ii) Crew briefing and preparation.

- (iii) Layout and assembly.
  - (iv) Preflight inspection.
  - (v) Inflation.
  - (vi) Basket/gondola management.
  - (vii) Pre-launch check.
- (3) Aerodrome operations, including the applicant's knowledge and performance of the following tasks—
- (i) Radio communications and ATC light signals.
- (4) Launches and landing, including the applicant's knowledge and performance of the following tasks—
- (i) Normal launch.
  - (ii) Launch over obstacle.
  - (iii) Approach to landing.
  - (iv) Normal landing.
  - (v) High-wind landing.
- (5) Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—
- (i) Ascents.
  - (ii) Altitude control (level flight).
  - (iii) Descents.
  - (iv) Contour flying.
  - (v) Obstacle clearance.
  - (vi) Tethering.
  - (vii) Winter flying.
  - (viii) Mountain flying.
- (6) Navigation, including the applicant's knowledge and performance of the following tasks—
- (i) Navigation.
- (7) Emergency operations, including the applicant's knowledge and performance of the following tasks—
- (i) Systems and equipment malfunctions.
  - (ii) Emergency equipment and survival gear.
  - (iii) Water landing.
  - (iv) Thermal flight.

(8) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—

- (i) Recovery.
- (ii) Deflation and packing.
- (iii) Refueling.



## **Standard NO:1.6 – PRIVATE PILOT LICENCE REQUIREMENTS**

### **Standard NO:1.6.1**

#### **Regulation 31(2)**

##### ***Aeronautical Knowledge Requirements for a Private Pilot Licence***

1 An applicant for a Private Pilot Licence shall demonstrate aeronautical knowledge in at least the following subjects appropriate to the privileges of the licence being sought and appropriate to the category of aircraft intended to be included in the licence:

##### **Air law**

(a) rules and regulations relevant to the holder of a private pilot licence, rules of the air, altimeter setting procedures and appropriate air traffic services practices and procedures;

##### **Aircraft general knowledge for aeroplane, helicopter, powered-lift and airship**

(b) principles of operation and function of powerplants, systems and instruments;

(c) operating limitations of the relevant category of aircraft and power-plants, relevant operational information from the flight manual or other appropriate documents;

(d) for helicopter and powered-lift, transmission or power-trains, as applicable;

(e) for airship, 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 and practical application of take-off, landing and other performance data;

(h) pre-flight and en route flight planning appropriate to private operations under Visual Flight Rules, preparation and filing of air traffic services flight plans, appropriate air traffic services 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;

##### **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 deadreckoning techniques; use of aeronautical charts;

##### **Operational Procedures**

(l) application of threat and error management principles to operational performance;

(m) altimeter setting procedures;

(n) use of aeronautical documentation such as AIP, NOTAM, aeronautical chart 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 helicopter, and where applicable, powered-lift, settling with power, ground resonance, retreating blade stall, dynamic roll-over and other operation hazards, safety procedures associated with flight in Visual Meteorological Conditions;

(q) principles of flight; and

### **Radiotelephony**

(r) communication procedures and phraseology as applied to Visual Flight Rules operations, action to be taken in case of communication failure..

### **Private Pilot Licence Requirements to Operate Radiotelephone on Board an Aircraft**

2. Where the applicant has met the requirements pertinent to the operation of the radiotelephone on board an aircraft, the Director may endorse the pilot licence for the operation of such radiotelephone.

### **Standard NO:1.6.2**

#### **Regulation 33(1)**

#### ***PPL Flight Instruction And Skill Test—Aeroplane Category***

The flight instruction and skill test for the single-engine and multi-engine private pilot licence – aeroplane shall include at least the following areas of operation with CRM competencies applied and evident in all tasks:

*Note 1: When (SE) is indicated the item or paragraph is only for single-engine, when (ME) is indicated the item or paragraph is only for multi-engine. When nothing is indicated the item or paragraph is for single-engine and multi-engine.*

*Note 2: When (S) is indicated, the item is only for seaplanes, when (L) is indicated, the item is only for landplanes. When nothing is indicated the item is for land and seaplanes.*

(1) Preflight preparation; including the applicant's knowledge and performance of the following tasks—

- (i) Licences and documents.
- (ii) Airworthiness requirements
- (iii) Weather information.
- (iv) Cross-country flight planning.
- (v) National airspace system.
- (vi) Performance and limitations.
- (vii) Operation of system.
- (viii) Principles of flight.
- (ix) Water and Seaplane Characteristics (S).
- (x) Seaplane bases, maritime rules and aids to marine navigation (S).

(xi) Aeromedical factors.

(2) Preflight procedures; including the applicant's knowledge and performance of the following tasks—

- (i) Preflight inspection.
- (ii) Cockpit management.
- (iii) Engine Starting
- (iv) Taxiing (L).
- (v) Taxiing and Sailing (S).
- (vi) Before takeoff check.

(3) Aerodrome and seaplane operations; including the applicant's knowledge and performance of the following tasks—

- (i) Radio communications and ATC light signals.
- (ii) Traffic patterns.
- (iii) Aerodrome/Seaplane Base, runway and taxiway signs, markings and lighting.

(4) Takeoffs, landings and go-arounds; including the applicant's knowledge and performance of the following tasks—

- (i) Normal and crosswind takeoff and climb.
- (ii) Normal and crosswind approach and landing.
- (iii) Soft-field takeoff and climb (SE) (L).
- (iv) Soft-field approach and landing (SE) (L).
- (v) Short-field (Confined area (S)) takeoff and maximum performance climb.
- (vi) Short-field approach (Confined area (S)) and landing.
- (vii) Glassy Water takeoff and climb (S).
- (viii) Glassy water approach and landing (S).
- (ix) Rough water takeoff and climb (S).
- (x) Rough water approach and landing (S).
- (xi) Forward slip to a landing (SE).
- (xii) Go-around /rejected landing.

(5) Performance manoeuvre; including the applicant's knowledge and performance of the following tasks—

- (i) Steep turns.

(6) Ground reference manoeuvres; including the applicant's knowledge and performance of the following tasks—

- (i) Rectangular course.

- (ii) S-turns.
  - (iii) Turns around a point.
- (7) Navigation; including the applicant's knowledge and performance of the following tasks—
- (i) Pilotage and dead reckoning.
  - (ii) Navigation systems and radar services.
  - (iii) Diversion.
  - (iv) Lost procedures.
- (8) Slow flight and stalls; including the applicant's knowledge and performance of the following tasks—
- (i) Manoeuvring during slow flight.
  - (ii) Power-off stalls.
  - (iii) Power-on stalls
  - (iv) Spin awareness
- (9) Basic instrument manoeuvres; including the applicant's knowledge and performance of the following tasks—
- (i) Straight-and-level flight.
  - (ii) Constant airspeed climbs.
  - (iii) Constant airspeed descents.
  - (iv) Turns to headings.
  - (v) Recovery from unusual flight.
  - (vi) Radio Communications, navigation systems/facilities and radar services; including the applicant's knowledge and performance of the following tasks—
- (10) Emergency operations; including the applicant's knowledge and performance of the following tasks—
- (i) Emergency approach and landing.
  - (ii) Emergency descent (ME).
  - (iii) Engine failure during takeoff before minimum controllable airspeed (VMC) (simulated) (ME).
  - (iv) Engine failure after lift-off (simulated) (ME).
  - (v) Approach and landing with an inoperative engine (simulated) (ME).
  - (vi) Systems and equipment malfunctions.
  - (vii) Emergency equipment and survival gear.
- (11) Multi-engine operations (ME); including the applicant's knowledge and performance of the following tasks—

- (i) Manoeuvring with one engine inoperative.
- (ii) VMC demonstration.
- (iii) Engine failure during flight (by reference to instruments).
- (iv) Instrument approach – one engine inoperative (by reference to instruments).

(12) Night operation; including the applicant's knowledge and performance of the following tasks—

- (i) Night preparation.

(13) Post-flight procedures; including the applicant's knowledge and performance of the following tasks—

- (i) After landing, parking and securing.
- (ii) Anchoring (S).
- (iii) Docking and mooring (S).
- (iv) Ramping/Beaching (S).

### **Standard NO:1.6.3**

#### **Regulation 33(1)**

#### ***PPL Flight Instruction And Skill Test—Helicopter Category***

The flight instruction and skill test for the private pilot licence - helicopter shall include at least the following areas of operation with CRM competencies applied and evident in all tasks:

(1) Preflight preparation; including the applicant's knowledge and performance of the following tasks—

- (i) Licences and documents.
- (ii) Weather information.
- (iii) Cross-country flight planning.
- (iv) National airspace system.
- (v) Performance and limitations.
- (vi) Operation of system.
- (vii) Minimum equipment list.
- (viii) Aeromedical factors.

(2) Preflight procedures; including the applicant's knowledge and performance of the following tasks—

- (i) Preflight inspection.
- (ii) Cockpit management.
- (iii) Engine Starting and rotor engagement.
- (iv) Before takeoff check.

(3) Aerodrome and heliport operations; including the applicant's knowledge and performance of the following tasks—

- (i) Radio communications and ATC light signals.
- (ii) Traffic patterns.
- (iii) Aerodrome and heliport markings and lighting.

(4) Hovering manoeuvres; including the applicant's knowledge and performance of the following tasks—

- (i) Vertical takeoff and landing.
- (ii) Slope operations.
- (iii) Surface taxi.
- (iv) Hover taxi.
- (v) Air taxi.

(5) Takeoffs, landings and go-arounds; including the applicant's knowledge and performance of the following tasks—

- (i) Normal and crosswind takeoff and climb.
- (ii) Normal and crosswind approach.
- (iii) Maximum performance takeoff and climb.
- (iv) Steep approach.
- (v) Rolling takeoff.
- (vi) Shallow approach and running/roll-on landing.
- (vii) Go-around.

(6) Performance manoeuvre; including the applicant's knowledge and performance of the following tasks—

- (i) Rapid deceleration.
- (ii) Straight in autorotation.

(7) Navigation; including the applicant's knowledge and performance of the following tasks—

- (i) Pilotage and dead reckoning.
- (ii) Radio navigation and radar services.
- (iii) Diversion.
- (iv) Lost procedures.

(8) Emergency operations; including the applicant's knowledge and performance of the following tasks—

- (i) Power failure at a hover.
- (ii) Power failure at altitude.

- (iii) Systems and equipment malfunctions.
- (iv) Settling-with-power.
- (v) Low rotor RPM recovery.
- (vi) Dynamic rollover.
- (vii) Ground resonance.
- (viii) Low G conditions.
- (ix) Emergency equipment and survival gear.

(9) Night operation; including the applicant's knowledge and performance of the following tasks—

- (i) Physiological aspects of night flying.
- (ii) Lighting and equipment for night flying.

(10) Post-flight procedures; including the applicant's knowledge and performance of the following tasks—

- (i) After landing and securing.

#### **Standard NO:1.6.4**

#### **Regulation 33(1)**

#### ***PPL Flight Instruction And Skill Test—Airship Category***

The flight instruction and skill test for the private pilot licence- airship category shall include at least the following areas of operation with CRM competencies applied and evident in all tasks:

(1) Preflight preparation, including the applicant's knowledge and performance of the following tasks—

- (i) Certificates and documents.
- (ii) Weather information.
- (iii) Cross-country flight planning.
- (iv) National airspace system.
- (v) Performance and limitations
- (vi) Operation of systems.
- (vii) Aeromedical factors.

(2) Preflight procedures, including the applicant's knowledge and performance of the following tasks—

- (i) Preflight inspection.
- (ii) Cockpit management.
- (iii) Engine starting.
- (iv) Unmasting and positioning for takeoff.

- (v) Ground handling.
  - (vi) Before takeoff check.
- (3) Aerodrome operations, including the applicant's knowledge and performance of the following tasks—
- (i) Radio communications and ATC light signals.
  - (ii) Traffic patterns.
  - (iii) Airport and runway markings and lighting.
- (4) Takeoffs, landings and go-arounds, including the applicant's knowledge and performance of the following tasks:
- (i) Ground weigh-off.
  - (ii) Up-ship takeoff.
  - (iii) Wheel takeoff.
  - (iv) Approach and landing.
  - (v) Go-around.
- (5) Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—
- (i) Straight-and-level flight.
  - (ii) Ascents and descents.
  - (iii) Level turns.
  - (iv) In-flight weigh-off.
  - (v) Manual pressure control.
  - (vi) Static and dynamic trim.
- (6) Ground reference manoeuvres, including the applicant's knowledge and performance of the following tasks—
- (i) Rectangular course.
  - (ii) Turns around a point.
- (7) Navigation, including the applicant's knowledge and performance of the following tasks—
- (i) Pilotage and dead reckoning.
  - (ii) Navigation systems and radar services.
  - (iii) Diversion.
  - (iv) Lost procedures.
- (8) Emergency operations, including the applicant's knowledge and performance of the following tasks—
- (i) Engine fire during flight.



- (ii) Envelope emergencies.
- (iii) Free ballooning.
- (iv) Ditching and emergency landing.
- (v) Systems and equipment malfunctions.

(9) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—

- (i) Mastings.
- (ii) Post-masting.

### **Standard NO:1.6.5**

#### **Regulation 33(1)**

##### ***Skill Test Performance Requirements for Private Pilot Licence***

The applicant shall have demonstrated the ability to perform as pilot-in-command of an aircraft within the appropriate category of aircraft, the required procedures and manoeuvres 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;
- b) operate the aircraft within its limitations;
- c) complete all manoeuvres with smoothness and accuracy;
- d) exercise good judgement 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 manoeuvre is assured.

### **Standard NO:1.6.6**

#### **Regulation 34(4)**

##### ***Required Aeronautical Experience for the issue of a Private Pilot Licence***

The aeronautical experience required for the issue of a Private Pilot Licence shall include the following for the category and class of aircraft for each category and class rating sought, as applicable:

#### **Aeroplanes**

1. Specific experience requirements for the issue of the aeroplane category rating.

The applicant shall have completed –

(a) not less than 40 hours of flight time, or 35 hours if completed during a course of approved training, as an aeroplane pilot appropriate to the class rating sought. Credit shall be limited to a maximum of 5 hours for experience as a pilot under instruction in a flight simulation training device as part of the total flight time of 40 hours or 35 hours, as the case may be;

(b) in aeroplanes, 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, totalling not less than 270 km (150NM) in the course of which full stop landings at two different aerodromes shall be made.

## **Helicopters**

2. Specific experience requirements for the issue of the helicopter category rating.

The applicant shall have completed –

(a) not less than 40 hours of flight time, or 35 hours if completed during a course of approved training, as a helicopter pilot. Credit shall be limited to a maximum of 5 hours for experience as a pilot under instruction in a flight simulation training device as part of the total flight time of 40 hours or 35 hours, as the case may be;

(b) 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 totalling not less than 180 km (100 NM) in the course of which landings at two different points shall be made.

## **Airships**

3. Specific experience requirements for the issue of the airship category rating.

The applicant shall have completed not less than 25 hours of flight time as an airship pilot, including at least –

(a) 3 hours of cross-country flight training in an airship with a crosscountry flight totalling 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.

**Standard NO.1.7-COMMERCIAL PILOT LICENCE REQUIREMENTS**  
**Regulation 39(1)(h),41(2) and 42**

**Standard NO.1.7.1**

**Regulation 39(1)(h), 42**

***CPL Flight Instruction And Skill Test—Aeroplane Category***

Flight instruction

1. The applicant shall have received dual instruction in aeroplanes 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;
- 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 crosswind take-offs and landings;
- i) maximum performance (short field and obstacle clearance) take-offs; short-field landings;
- j) basic flight manoeuvres 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 manoeuvres including simulated aeroplane equipment malfunctions;
- m) operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures; and
- n) communication procedures and phraseology.

2. The flight instruction and skill test for the single-engine and multi-engine commercial pilot licence - aeroplane shall include at least the following areas of operation with CRM competencies applied and evident in all tasks:

*Note 1: When (SE) is indicated the item or paragraph is only for single-engine, when (ME) is indicated the item or paragraph is only for multi-engine. When nothing is indicated the item or paragraph is for single-engine and multi-engine.*

*Note 2: When (S) is indicated, the item is only for seaplanes, when (L) is indicated, the item is only for landplanes. When nothing is indicated the item is for land and seaplanes.*

(1) Preflight preparation; including the applicant's knowledge and performance of the following tasks—

- (i) Licences and documents.
- (ii) Airworthiness requirements.
- (iii) Weather information.
- (iv) Cross-country flight planning.
- (v) National airspace system.
- (vi) Performance and limitations.
- (vii) Operation of system.
- (viii) Principles of flight (ME).
- (ix) Water and Seaplane characteristics (S).
- (x) Seaplane bases, maritime rules and aids to marine navigation (S).
- (xi) Aeromedical factors.

(2) Preflight procedures; including the applicant's knowledge and performance of the following tasks—

- (i) Preflight inspection.
- (ii) Cockpit management.
- (iii) Engine Starting.
- (iv) Taxiing (L).
- (v) Taxiing and sailing (S).
- (vi) Before takeoff check.

(3) Aerodrome and seaplane base operations; including the applicant's knowledge and performance of the following tasks—

- (i) Radio communications and ATC light signals.
- (ii) Traffic patterns.
- (iii) Aerodrome/Seaplane base, runway and taxiway signs, markings and lighting.

(4) Takeoffs, landings and go-arounds; including the applicant's knowledge and performance of the following tasks—

- (i) Normal and crosswind takeoff and climb.
- (ii) Normal and crosswind approach and landing.

- (iii) Soft-field takeoff and climb (SE).
- (iv) Soft-field approach and landing (SE).
- (v) Short-field (Confined area (S)) takeoff and maximum performance climb.
- (vi) Short-field (Confined area (S)) approach and landing.
- (vii) Glassy water takeoff and climb (S).
- (viii) Glassy water approach and landing (S).
- (ix) Rough water takeoff and climb (S).
- (x) Rough water approach and landing (S).
- (xi) Power-off 180 degrees accuracy approach and landing (SE).
- (xii) Go-around /rejected landing.

(5) Performance manoeuvres; including the applicant's knowledge and performance of the following tasks—

- (i) Steep turns.
- (ii) Steep spiral (SE).
- (iii) Chandelles (SE).
- (iv) Lazy eights (SE).

(6) Ground reference manoeuvres; including the applicant's knowledge and performance of the following tasks—

- (i) Eights on pylons (SE).

(7) Navigation; including the applicant's knowledge and performance of the following tasks—

- (i) Pilotage and dead reckoning.
- (ii) Navigation systems and radar services.
- (iii) Diversion.
- (iv) Lost procedures

(8) Slow flight and stalls; including the applicant's knowledge and performance of the following tasks—

- (i) Manoeuvring during slow flight.
- (ii) Power-off stalls.
- (iii) Power-on stalls.
- (iv) Spin awareness.

(9) Emergency operations; including the applicant's knowledge and performance of the following tasks—

- (i) Emergency approach and landing.
- (ii) Emergency descent (ME).

- (iii) Engine failure during takeoff before VMC (simulated) (ME).
- (iv) Engine failure after lift-off (simulated) (ME).
- (v) Approach and landing with an inoperative engine (simulated) (ME).
- (vi) Systems and equipment malfunctions.
- (vii) Emergency equipment and survival gear.

(10) High altitude operations; including the applicant's knowledge and performance of the following tasks—

- (i) Supplemental oxygen.
- (ii) Pressurization.

(11) Multi-engine operations (ME); including the applicant's knowledge and performance of the following tasks—

- (i) Manoeuvring with one engine inoperative.
- (ii) VMC demonstration.
- (iii) Engine failure during flight (by reference to instruments).
- (iv) Instrument approach – one engine inoperative (by reference to instruments).

(12) Post-flight procedures; including the applicant's knowledge and performance of the following tasks—

- (i) After landing, parking and securing.
- (ii) Anchoring (S).
- (iii) Docking and mooring (S).
- (iv) Ramping/beaching (S).

### **Standard NO.1.7.2**

#### **Regulation 39(1)(h), 42**

#### ***CPL Flight Instruction And Skill Test—Helicopter Category***

1. 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;
- 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 manoeuvring 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;
- l) operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures; and
- m) communication procedures and phraseology.

2. The flight instruction and skill test for the commercial pilot licence – helicopter shall include at least the following areas of operation with CRM competencies applied and evident in all tasks:

(1) Preflight preparation; including the applicant's knowledge and performance of the following tasks—

- (i) Licences and documents.
- (ii) Weather information.
- (iii) Cross-country flight planning.
- (iv) National airspace system.
- (v) Performance and limitations.
- (vi) Operation of system.
- (vii) Minimum equipment list.
- (viii) Aeromedical factors.
- (ix) Physiological aspects of night flying.
- (x) Lighting and equipment for night flying.

(2) Preflight procedures; including the applicant's knowledge and performance of the following tasks—

- (i) Preflight inspection.
- (ii) Cockpit management.
- (iii) Engine Starting and rotor engagement.
- (iv) Before takeoff check.

(3) Aerodrome and heliport operations; including the applicant's knowledge and performance of the following tasks—

- (i) Radio communications and ATC light signals.
- (ii) Traffic patterns.
- (iii) Aerodrome and heliport markings and lighting.

(4) Hovering manoeuvres; including the applicant's knowledge and performance of the following tasks—

- (i) Vertical takeoff and landing.
- (ii) Slope operations.
- (iii) Surface taxi.
- (iv) Hover taxi.
- (v) Air taxi.

(5) Takeoffs, landings and go-arounds; including the applicant's knowledge and performance of the following tasks—

- (i) Normal and crosswind takeoff and climb.
- (ii) Normal and crosswind approach and landing.
- (iii) Maximum performance takeoff and climb.
- (iv) Steep approach.
- (v) Rolling takeoff.
- (vi) Shallow approach and running/roll-on landing.
- (vii) Go-around.

(6) Performance manoeuvre; including the applicant's knowledge and performance of the following tasks—

- (i) Rapid deceleration.
- (ii) 180 Degrees autorotation.

(7) Navigation; including the applicant's knowledge and performance of the following tasks—

- (i) Pilotage and dead reckoning.
- (ii) Radio navigation and radar services.
- (iii) Diversion.
- (iv) Lost procedures.

(8) Emergency operations; including the applicant's knowledge and performance of the following tasks—

- (i) Power failure at a hover.
- (ii) Power failure at altitude.



- (iii) Systems and equipment malfunctions.
  - (iv) Settling-with-power.
  - (v) Low rotor RPM recovery.
  - (vi) Dynamic rollover.
  - (vii) Ground resonance.
  - (viii) Low G conditions.
  - (ix) Emergency equipment and survival gear.
- (9) Special operations; including the applicant's knowledge and performance of the following tasks—
- (i) Confined area operation.
  - (ii) Pinnacle/platform operations.
- (10) Post-flight procedures; including the applicant's knowledge and performance of the following tasks—
- (i) After landing, parking and securing.

**Standard NO.1.7.3**

**Regulation 39(1)(h), 42**

***CPL Flight Instruction And Skill Test—Airship Category***

1. 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:

- a) recognize and manage threats and errors;
- b) pre-flight operations, including mass and balance determination, airship inspection and servicing;
- c) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
- d) techniques and procedures for the take-off, including appropriate limitations, emergency procedures and signals used;
- e) control of the airship by external visual reference;
- f) recognition of leaks;
- g) normal take-offs and landings;
- h) maximum performance (short field and obstacle clearance) take-offs; short-field landings;
- i) flight under IFR;
- j) cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids;

- k) emergency operations, including simulated airship equipment malfunctions;
- l) operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures; and
- m) communication procedures and phraseology.

2. The flight instruction and skill test for the commercial pilot licence – airship shall include at least the following areas of operation with CRM competencies applied and evident in all tasks:

- (1) Technical subjects, including the applicant's knowledge and performance of the following tasks—
  - (i) Aeromedical factors.
  - (ii) Visual scanning and collision avoidance.
  - (iii) Use of distractions during flight training.
  - (iv) Principles of flight.
  - (v) Airship weight-off, ballast, and trim.
  - (vi) Night operations.
  - (vii) Regulations and publications.
  - (viii) National airspace system.
  - (ix) Logbook entries and licence endorsement.
- (2) Preflight preparation, including the applicant's knowledge and performance of the following tasks—
  - (i) Licences and documents.
  - (ii) Weather information.
  - (iii) Cross-country flight planning.
  - (iv) Performance and limitations.
  - (v) Operations of systems.
- (3) Preflight lesson on a manoeuvre to be performed in flight, including the applicant's knowledge and performance of the following tasks—
  - (i) Manoeuvre lesson.
- (4) Preflight procedures, including the applicant's knowledge and performance of the following tasks—
  - (i) Preflight inspection.
  - (ii) Cockpit management.
  - (iii) Engine starting.
  - (iv) Unmasting and positioning for takeoff.

- (v) Ground handling.
  - (vi) Before takeoff check.
- (5) Aerodrome operations, including the applicant's knowledge and performance of the following tasks—
- (i) Radio communications.
  - (ii) Traffic pattern operations.
  - (iii) Aerodrome, runway, and taxiway markings and lighting.
- (6) Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—
- (i) Flight to, from, and at pressure height.
  - (ii) In-flight weigh-off.
  - (iii) Manual pressure control.
  - (iv) Static and dynamic trim.
- (7) Navigation, including the applicant's knowledge and performance of the following tasks—
- (i) Pilotage and dead reckoning.
  - (ii) Diversion.
  - (iii) Lost procedures.
  - (iv) Navigation systems and air traffic control radar services.
- (8) Emergency operations, including the applicant's knowledge and performance of the following tasks—
- (i) Aborted takeoff.
  - (ii) Engine failure during takeoff.
  - (iii) Engine failure during flight.
  - (iv) Engine fire during flight.
  - (v) Envelope emergencies.
  - (vi) Free ballooning.
  - (vii) Ditching and emergency landing.
  - (viii) Systems and equipment malfunctions.
- (9) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—
- (i) Mastings.
  - (ii) Post-masting.

#### **Standard NO.1.7.4**

##### **Regulation 39(1)(i), 42**

#### **Procedure for Conduct of Skill Test Commercial Pilot Licence**

The applicant shall have demonstrated the skills required for fulfilling all the competency units 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;
- b) smoothly and accurately, manually control the aeroplane within its limitations at all times, such that the successful outcome of a procedure or manoeuvre 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.

Progress in acquiring the required skills specified in these standards shall be continuously assessed.

#### **Standard NO:1.7.5**

##### **Regulation 40**

#### ***Aeronautical knowledge requirements for a Commercial Pilot Licence***

1. The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a commercial pilot licence 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 licence; rules of the air; appropriate air traffic services practices and procedures;

##### ***Aircraft general knowledge for aeroplanes, airships, helicopters and powered-lifts***

- b) principles of operation and functioning of powerplants, systems and instruments;
- c) operating limitations of the relevant category of aircraft and powerplants; 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 powerplants 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, planning and loading***

- h) effects of loading and mass distribution on aircraft handling, flight characteristics and performance; mass and balance calculations;
- i) use and practical application of take-off, landing and other performance data;
- j) pre-flight and en-route flight planning appropriate to commercial operations under VFR; preparation and filing of air traffic services flight plans; appropriate air traffic services procedures; altimeter setting procedures;
- k) in the case of airships, helicopters and powered-lifts, effects of external loading on handling;

### ***Human performance***

- l) human performance including principles of threat and error management;

### ***Meteorology***

- m) interpretation and application of aeronautical meteorological reports, charts and forecasts; use of, and procedures for obtaining, meteorological information, pre-flight and in-flight; altimetry;
- n) 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;
- o) causes, recognition and effects of icing; frontal zone penetration procedures; hazardous weather avoidance;

### ***Navigation***

- p) 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;
- q) 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***

- r) application of threat and error management to operational performance;
- s) use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;
- t) altimeter setting procedures;
- u) appropriate precautionary and emergency procedures;

v) operational procedures for carriage of freight; potential hazards associated with dangerous goods;

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

x) 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***

y) principles of flight;

### ***Radiotelephony***

z) communication procedures and phraseology as applied to VFR operations; action to be taken in case of communication failure.

### ***Commercial Pilot Requirements to Operate Radiotelephone on Board an Aircraft***

2. Where the applicant has met the requirements pertinent to the operation of the radiotelephone on board an aircraft, the Director may endorse the pilot licence for the operation of such radiotelephone

## **Standard NO:1.7.6**

### **Regulation 43(1)**

#### ***Commercial Pilot Aeronautical Experience Requirements***

An applicant for a commercial pilot licence shall log at least the following hours of aeronautical experience as a pilot in each category and class applied for, including at least the following:

#### **Aeroplanes**

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 aeroplanes. The Director may approve a credit of a maximum of 10 hours for experience as a pilot under instruction in a flight simulation training device as part of the total flight time of 200 hours or 150 hours, as the case may be.

The applicant shall have completed in aeroplanes 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 totalling 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 licence are to be exercised at night, 5 hours of night flight time including 5 take-offs and 5 landings as pilot-in-command.

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

### **Helicopters**

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. The Director may approve a credit of a maximum of 10 hours for experience as a pilot under instruction in a flight simulation training device as acceptable as part of the total flight time of 150 hours or 100 hours, as the case may be.

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.

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

### **Airships**

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 required areas of operation.

## ***Standard NO.1.8 - REQUIREMENTS FOR AIRLINE TRANSPORT PILOT LICENCE:***

### **Standard NO.1.8.1**

#### **Regulation 58,**

#### ***Aeronautical knowledge areas for an Airline Transport Pilot Licence***

1. The following are the required aeronautical knowledge areas for an Airline Transport Pilot Licence:

The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of an airline transport pilot licence 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 an airline transport pilot licence; rules of the air; appropriate air traffic services practices and procedures;

#### ***Aircraft general knowledge for aeroplanes, helicopters and powered-lifts***

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

c) principles of operation, handling procedures and operating limitations of aircraft powerplants; effects of atmospheric conditions on engine performance; relevant

operational information from the flight manual or other appropriate document;

d) operating procedures and limitations of the relevant category of aircraft; effects of atmospheric conditions on aircraft 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 powerplants of appropriate aircraft;

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

#### ***Flight performance, planning and loading***

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

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

k) 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;



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

### **Human performance**

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

### ***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;

p) causes, recognition and effects of 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; jetstreams;

### ***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 aircraft;

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

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

### ***Operational procedures***

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

w) interpretation and use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;

x) precautionary and emergency procedures; safety practices;

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, poweredlifts, 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.

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

### **Airline Transport Pilot Requirements to Operate Radiotelephone on Board an Aircraft**

2. Where the applicant has met the requirements pertinent to the operation of the radiotelephone on board an aircraft, the Director may recommend the Director endorse the pilot licence for the operation of such radiotelephone.

### **Standard NO.1.8.2**

#### **Regulation 57(1)(h), 59(2),66(2)(c)**

#### ***ATP Skill Test Performance Requirements***

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 powerplant, 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 including simulated engine failure.

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

The applicant shall have demonstrated the ability to:

- a) recognize and manage threats and errors;
- b) smoothly and accurately, manually control the aircraft within its limitations at all times, such that the successful outcome of a procedure or manoeuvre 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 judgement 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.

### **Standard NO.1.8.3**

#### **Regulation 59(2), 66(2)(c)**

#### ***ATP And Aircraft Type Rating Flight Instruction And Skill Test—Aeroplane Category***

The flight instruction and skill test for the airline transport pilot licence - aeroplanes shall include at least the following areas of operation with CRM competencies applied and evident in all tasks:

(1) Preflight preparation; including the applicant's knowledge and performance of the following tasks—

- (i) Equipment examination.
- (ii) Performance and limitations.

(2) Preflight procedures; including the applicant's knowledge and performance of the following tasks—

- (i) Preflight inspection.
- (ii) Powerplant start.
- (iii) Taxiing.
- (iv) Before takeoff checks.

(3) Takeoffs and departure phase; including the applicant's knowledge and performance of the following tasks—

- (i) Normal takeoffs with different flap settings, including expedited takeoff.
- (ii) Instrument takeoff.
- (iii) Powerplant failure during takeoff.
- (iv) Rejected takeoff.
- (v) Departure procedures.

(4) In-flight manoeuvres; including the applicant's knowledge and performance of the following tasks—

- (i) Steep turns.
- (ii) Approach to stalls.
- (iii) Powerplant failure.

- (iv) Specific flight characteristics.
  - (v) Recovery from unusual altitudes.
- (5) Instrument procedures; including the applicant's knowledge and performance of the following tasks—
- (i) Standard terminal arrival/flight management system procedures.
  - (ii) Holding procedures.
  - (iii) Precision instrument approaches.
  - (iv) Non-precision instrument approaches.
  - (v) Circling approach.
  - (vi) Missed approach.
- (6) Landings and approaches to landings; including the applicant's knowledge and performance of the following tasks—
- (i) Normal and crosswind approaches and landings.
  - (ii) Landing from a precision approach.
  - (iii) Approach and landing with (simulated) powerplant failure.
  - (iv) Landing from a circling approach.
  - (v) Rejected landing.
  - (vi) Landing from a no-flap or a non-standard flap approach.
- (7) Normal and abnormal procedures.
- (8) Emergency procedures.
- (9) Post-flight procedures; including the applicant's knowledge and performance of the following tasks—
- (i) After landing procedures.
  - (ii) Parking and securing.

#### **Standard NO.1.8.4**

##### **Regulation 59(2), 66(2)(c)**

##### ***ATP And Aircraft Type Rating Flight Instruction And Skill Test—Helicopter Category***

The flight instruction and skill test for the airline transport pilot licence for helicopters shall include at least the following areas of operation with CRM competencies applied and evident in all tasks:

- (1) Preflight preparations and checks; including the applicant's knowledge and performance of the following tasks—
  - (i) Equipment examination.
  - (ii) Performance and limitations.

- (2) Preflight procedures; including the applicant's knowledge and performance of the following tasks—
  - (i) Preflight inspection.
  - (ii) Powerplant start.
  - (iii) Taxiing.
  - (iv) Pre-takeoff checks.
- (3) Takeoff and departure phase; including the applicant's knowledge and performance of the following tasks—
  - (i) Normal and crosswind takeoff.
  - (ii) Instrument takeoff.
  - (iii) Powerplant failure during takeoff.
  - (iv) Rejected takeoff.
  - (v) Instrument departure.
- (4) In-flight manoeuvres; including the applicant's knowledge and performance of the following tasks—
  - (i) Steep turns.
  - (ii) Powerplant failure-multi-engine helicopter.
  - (iii) Powerplant failure-single-engine helicopter.
  - (iv) Recovery from unusual altitudes.
  - (v) Settling with power.
- (5) Instrument procedures; including the applicant's knowledge and performance of the following tasks—
  - (i) Instrument arrival.
  - (ii) Holding.
  - (iii) Precision instrument approaches.
  - (iv) Non-precision instrument approaches.
  - (v) Missed approach.
- (6) Landings and approaches to landings; including the applicant's knowledge and performance of the following tasks—
  - (i) Normal and crosswind approaches and landings.
  - (ii) Approach and landing with simulated powerplant failure-multiengine helicopter.
  - (iii) Rejected landing.
- (7) Normal and abnormal procedures; including the applicant's knowledge and performance of the tasks.

- (8) Emergency procedures; including the applicant's knowledge and performance.
- (9) Postflight procedures; including the applicant's knowledge and performance of the following tasks—
  - (i) After landing procedures.
  - (ii) Parking and securing.

## **Standard NO.1.9- INSTRUMENT RATING REQUIREMENTS**

### **Regulation 68**

#### **Standard NO.1.9.1**

#### **Regulation 68(1)(d)(iii)**

#### ***Aeronautical Knowledge Areas for Instrument Rating***

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;

#### ***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;

### ***Radiotelephony***

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

### ***Standard NO.1.9.2***

#### ***Regulation 68(1)(d)(iv), 95(b)(iii)***

### **Flight Instruction Operational Experience, Skill Test and Proficiency Check**

1. The applicant shall have gained not less than 10 hours of the instrument flight time while receiving dual instrument flight instruction 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 services documents in the preparation of an IFR flight plan;
- b) pre-flight inspection, use of checklists, taxiing and pretake-off checks;
- c) procedures and manoeuvres 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;
  - holding procedures;
  - instrument approaches to specified minima;
  - missed approach procedures;
  - landings from instrument approaches;
- d) in-flight manoeuvres and particular flight characteristics.

2. If the privileges of the instrument rating are to be exercised on multi-engined 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.



3. The skill test and proficiency check for the instrument rating shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category of aircraft:

*Note: When (SE) is indicated the item or paragraph is only for single-engine, when (ME) is indicated the item or paragraphs is only for multi-engine. When nothing is indicated the item or paragraph is for single-engine and multi-engine.*

- (a) Preflight preparation; including the applicant's knowledge and performance of the following tasks—
  - (i) Weather information.
  - (ii) Cross-country flight planning.
- (b) Preflight procedures; including the applicant's knowledge and performance of the following tasks—
  - (i) Aircraft systems related to IFR operations.
  - (ii) Aircraft flight instruments and navigation equipment.
  - (iii) Instrument cockpit check.
- (c) Air traffic control clearances and procedures; including the applicant's knowledge and performance of the following tasks—
  - (i) Air traffic control clearances.
  - (ii) Compliance with departure, en route and arrival procedures and clearances.
  - (iii) Holding procedures.
- (d) Flight by reference to instruments; including the applicant's knowledge and performance of the following tasks—
  - (i) Straight-and-level flight.
  - (ii) Change of airspeed.
  - (iii) Constant airspeed climbs and descents.
  - (iv) Rate climbs and descents.
  - (v) Timed turns to magnetic compass headings.
  - (vi) Steep turns.
  - (vii) Recovery from unusual flight attitudes.
- (e) Navigation systems; including the applicant's knowledge and performance of the following tasks—
  - (i) Intercepting and tracking navigational systems and DME Arcs.
- (f) Instrument approach procedures; including the applicant's knowledge and performance of the following tasks—
  - (i) Non-precision instrument approach.
  - (ii) Precision ILS instrument approach.

- (iii) Missed approach.
  - (iv) Circling approach.
  - (v) Landing from a straight-in or circling approach.
- (g) Emergency operations; including the applicant's knowledge and performance of the following tasks—
- (i) Loss of communications.
  - (ii) One engine inoperative during straight-and-level flight and turns (ME).
  - (iii) One engine inoperative – instrument approach (ME).
  - (iv) Loss of gyro attitude and/or heading indicators.
- (h) Post-flight procedures; including the applicant's knowledge and performance of the following tasks—
- (i) Checking instruments and equipment.

***Standard NO.1.9.3***

***Regulation 68(1)(d) and 96(b)***

**Procedures For The Conduct Of Instrument Rating, Skill Test And Proficiency Check**

1. An applicant for a skill test for the Instrument Rating shall have received instruction on the same class or type of aircraft to be used for the skill test. The aircraft used for the skill test shall meet the requirements for training aircraft as set out in the Act or Regulations made thereunder. The instrument rating course shall be provided by an approved organization or authorized instructor approved to conduct such courses.
2. The administrative arrangements for confirming the applicant's suitability to take the test, including disclosure of the applicant's training record to the examiner, will be determined by the Director which approved the applicant's training.
3. Further training may be required following any failed test. Failure to achieve a pass in all paragraphs of the test in two attempts shall require further training as determined by the Director. There is no limit to the number of skill tests that may be attempted.

***Conduct of the Test***

5. The test is intended to simulate a practical flight. The route to be flown shall be chosen by the examiner. An essential element is the ability of the applicant to plan and conduct the flight from routine briefing material. The applicant shall undertake the flight planning and shall ensure that all equipment and documentation for the execution of the flight are on board. The duration of the flight shall be at least one hour.
6. The Director will provide the examiner with safety advice to be observed in the conduct of the test.
7. Should the applicant choose to terminate a skill test for reasons considered inadequate by the examiner, the applicant shall retake the entire skill test. If the test is terminated for reasons considered adequate by the examiner, only those paragraphs not completed shall be tested in a further flight.

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

9. An applicant shall normally be required to fly the aircraft from a position where the pilot in command functions can be performed and to carry out the test as if there is no other crew member. The examiner shall take no part in the operation of the aircraft, except when intervention is necessary in the interests of safety or to avoid unacceptable delay to other traffic. Whenever the examiner or another pilot functions as a co-pilot during the test, the privileges of the instrument rating will be restricted to multi-pilot operations. This restriction may be removed by the applicant carrying out another initial instrument rating skill test acting as if there was no other crew member on a single-pilot aircraft. Responsibility for the flight shall be allocated in accordance with national regulations.

10. Decision heights, altitude, minimum descent heights/altitudes and missed approach point shall be determined by the applicant and agreed by the examiner.

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

Note: During the proficiency check for revalidation or renewal of the Instrument Rating, the licence holder has to demonstrate the same as above to the examiner involved.

### ***Performance Requirements***

12. The applicant shall have demonstrated in an aircraft of the category for which the instrument rating is being sought the ability to perform the required procedures and manoeuvres 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 manoeuvres with smoothness and accuracy;
- d) exercise good judgement 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 manoeuvre is assured.

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.

**Standard NO.1.10- CATEGORY II AND III PILOT AUTHORIZATIONS  
REQUIREMENTS**

**Regulation 77**

**Standard NO.1.10.1**

**Regulation 77(6)(b)(ii)(A)**

***Conditions for Instrument Landing System approaches for Category II Pilot Authorizations***

The following are the conditions for Instrument Landing System approaches for Category II Pilot Authorizations:

- (a) under actual or simulated instrument flight conditions;
- (b) to the minimum decision height for the Instrument Landing System approach in the type aircraft in which the practical test is to be conducted, except that the approaches need not be conducted to the decision height authorized for Category II operations;
- (c) to the decision height authorized for Category II operations only where conducted in an approved flight simulator or an approved flight training device; and
- (d) in an aircraft of the same category and class, and type, as applicable, as the aircraft in which the practical test is to be conducted or in an approved flight simulator that—
  - (i) represents an aircraft of the same category and class, and type, as applicable, as the aircraft in which the authorization is sought; and
  - (ii) is used in accordance with an approved course conducted by an Approved Training Organization certified by the Director of Civil Aviation.

**Standard NO.1.10.2**

**Regulation 77(6)(b)(ii)(B)**

***Conditions for Instrument Landing System approaches for Category III Pilot Authorizations***

The following are the conditions for Instrument Landing System approaches for Category III Pilot authorizations:

- (a) under actual or simulated instrument flight conditions;
- (b) to the alert height or decision height for the Instrument Landing System approach in the type aircraft in which the practical test is to be conducted;
- (c) not necessarily to the decision height authorized for Category III operations;
- (d) to the alert height or decision height, as applicable, authorized for Category III operations only if conducted in an approved flight simulator or approved flight training device; and
- (e) in an aircraft of the same category and class, and type, as applicable, as the aircraft in which the practical test is to be conducted or in an approved flight simulator that—
  - (i) represents an aircraft of the same category and class, and type, as applicable, as the aircraft for which the authorization is sought; and

(ii) is used in accordance with an approved course conducted by an Aviation Training Organization certified by the Director of Civil Aviation.

**Standard NO.1.10.3**

**Regulation 77(8)(a)**

***Oral Increment of the Skill Test***

In the oral increment of the skill test, an applicant shall demonstrate knowledge of the following:

- (a) required landing distance;
- (b) recognition of the decision height;
- (c) missed approach procedures and techniques using computed or fixed attitude guidance displays;
- (d) use and limitations of Runway Visual Range;
- (e) use of visual clues, their availability or limitations, and altitude at which they are normally discernible at reduced Runway Visual Range readings;
- (f) procedures and techniques related to transition from non-visual to visual flight during a final approach under reduced Runway Visual Range;
- (g) effects of vertical and horizontal windshear;
- (h) characteristics and limitations of the Instrument Landing System and runway lighting system;
- (i) characteristics and limitations of the flight director system, auto approach coupler (including split axis type if equipped), auto throttle system (if equipped), and other required Category II equipment;
- (j) assigned duties of the Co-pilot during Category II approaches, unless the aircraft for which authorization is sought does not require a Co-pilot; and
- (k) instrument and equipment failure warning systems.

**Standard NO.1.10.4**

**Regulation 77(8)(b)**

***Flight Increment of the Skill Test***

The following requirements apply to the flight increment of the skill test:

- (a) the flight increment shall be conducted in an aircraft of the same category, class, and type, as applicable, as the aircraft in which the authorization is sought or in an approved flight simulator that—
  - (i) represents an aircraft of the same category and class, and type, as applicable, as the aircraft in which the authorization is sought; and
  - (ii) is used in accordance with an approved course conducted by an Approved Training Organization certified under Civil Aviation (Approved Training Organization) Regulations, 2007;

- (b) the flight increment shall consist of at least two Instrument Landing System approaches to 100 feet above ground level including at least one landing and one missed approach;
- (c) all approaches performed during the flight increment shall be made with the use of an approved flight control guidance system, except if an approved auto approach coupler is installed, at least one approach shall be hand flown using flight director commands;
- (d) if a multi-engine aircraft with the performance capability to execute a missed approach with one engine inoperative is used for the practical test, the flight increment shall include the performance of one missed approach with an engine, which shall be the most critical engine, if applicable, set at idle or zero thrust before reaching the middle marker;
- (e) if an approved multi-engine flight simulator or approved multi-engine flight training device is used for the practical test, the applicant shall execute a missed approach with the most critical engine, if applicable, failed;
- (f) for an authorization for an aircraft that requires a type rating, the applicant shall pass a practical test in co-ordination with a co-pilot who holds a type rating in the aircraft in which the authorization is sought; and
- (g) an inspector or evaluator may conduct oral questioning at any time during a practical test.

### **Standard NO.1.10.5**

#### **Regulation 77(9)(a)**

#### ***Knowledge Requirements for Category III Authorization***

An applicant for Category III authorization shall demonstrate knowledge of the following:

- (a) required landing distance;
- (b) determination and recognition of the alert height or decision height, as applicable, including use of a radar altimeter;
- (c) recognition of and proper reaction to significant failures encountered prior to and after reaching the alert height or decision height, as applicable;
- (d) missed approach procedures and techniques using computed or fixed attitude guidance displays and expected height loss as they relate to manual go-around or automatic go-around, and initiation altitude, as applicable;
- (e) use and limitations of Runway Visual Range, including determination of controlling Runway Visual Range and required transmissometers;
- (f) use, availability, or limitations of visual cues and the altitude at which they are normally discernible Runway Visual Range at reduced readings including—
  - (i) unexpected deterioration of conditions to less than minimum Runway Visual Range during approach, flare and rollout;

(ii) demonstration of expected visual references with weather at minimum conditions:

(A) the expected sequence of visual cues during an approach in which visibility is at or above landing minima; and

(B) procedures and techniques for making a transition from instrument reference flight to visual flight during a final approach under reduced Runway Visual Range;

(g) effects of vertical and horizontal windshear;

(h) characteristics and limitations of the Instrument Landing System and runway lighting system;

(i) characteristics and limitations of the flight director system, auto approach coupler (including split axis type if equipped), auto throttle system (if equipped), and other Category III equipment;

(j) assigned duties of the co-pilot during Category III operations, unless the aircraft for which authorization is sought does not require a Co-pilot;

(k) recognition of the limits of acceptable aircraft position and flight path tracking during approach, flare, and, if applicable, rollout; and

(l) recognition of, and reaction to, airborne or ground system faults or abnormalities, particularly after passing alert height or decision height, as applicable.

## **Standard NO.1.10.6**

### **Regulation 77(9)(b)**

#### ***Flight Skill Requirements***

1. An applicant may conduct the skill test in an aircraft of the same category and class, and type, as applicable, as the aircraft for which the authorization is sought, or in an approved flight simulator that—

(a) represents an aircraft of the same category and class, and type, as applicable, as the aircraft in which the authorization is sought; and

(b) is used in accordance with an approved course conducted by an organization approved for that purpose.

2. The skill test shall consist of at least two Instrument Landing System approaches to 100 feet above ground level, including one landing and one missed approach initiated from a very low altitude that may result in a touchdown during the go around manoeuvre;

3. The applicant shall perform all approaches during the skill test with the approved automatic landing system or an equivalent landing system approved by the Director.

4. Where a multi-engine aircraft with the performance capability to execute a missed approach with one engine inoperative is used for the practical test, the practical test shall include The performance of one missed approach with the most critical engine, where applicable, set at idle or zero thrust before reaching the middle or outer marker.

5. Where an approved multi-engine flight simulator or approved multi-engine flight training device is used, the applicant shall execute a missed approach with an engine, which shall be the most critical engine, if applicable, failed.
6. For an authorization for an aircraft that requires a type rating, the applicant shall pass a practical test in co-ordination with a co-pilot who holds a type rating in the aircraft in which the authorization is sought.
7. Subject to the limitations of this paragraph, for Category III operations predicated on the use of a fail passive rollout control system, the applicant shall execute at least one manual rollout using visual reference or a combination of visual and instrument references. The applicant shall initiate this manoeuvre by a fail-passive disconnect of the rollout control system—
  - (a) after main gear touchdown;
  - (b) prior to nose gear touchdown; and
  - (c) in conditions representative of the most adverse lateral touchdown displacement allowing a safe landing on the runway.
8. In weather conditions anticipated in Category III operations an inspector or Flight Test Examiner may conduct oral questioning at any time during the skill test.



**Standard NO.1.11 - FLIGHT INSTRUCTOR: FLIGHT INSTRUCTION, SKILL TEST AND PROFICIENCY CHECK**

**Regulation 89(2)**

**Standard NO.1.11.1**

**Regulation 89(2)**

***Flight Instruction, Skill Test And Proficiency Check - Aeroplane Category.***

The flight instruction, skill test and proficiency check for the flight instructor rating - aeroplane shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category and class of aircraft:

*Notes:*

*(1) When (SE) is indicated the item or paragraph is only for single-engine, when (ME) is indicated the item or paragraphs is only for multi-engine. When nothing is indicated the item or paragraph is for single-engine and multi-engine.*

*(2) When (S) is indicated, the item is only for seaplanes, when (L) is indicated, the item is only for landplanes. When nothing is indicated the item is for land and seaplanes.*

(1) Fundamentals of instruction; including the applicant's knowledge and performance of the following tasks—

- (i) The learning process.
- (ii) The teaching process.
- (iii) Teaching methods.
- (iv) Evaluation.
- (v) Flight instructor characteristics and responsibilities.
- (vi) Human factors.
- (vii) Planning instructional activity.

(2) Technical subject areas; including the applicant's knowledge and performance of the following tasks—

- (i) Aeromedical factors.
- (ii) Visual Scanning and collision avoidance.
- (iii) Principles of flight.
- (iv) Aeroplane flight controls.
- (v) Aeroplane weight and balance.
- (vi) Navigation and flight planning.
- (vii) Night operations.
- (viii) High altitude operations.
- (ix) Regulations and publications.

- (x) Use of minimum equipment list.
- (xi) National airspace system.
- (xii) Navigation aids and radar services.
- (xiii) Logbook entries and licence endorsements.
- (xiv) Water and seaplane characteristics (S).
- (xv) Seaplane bases, rules and aids to marine navigation (S).

(3) Preflight preparation; including the applicant's knowledge and performance of the following tasks—

- (i) Licences and documents.
- (ii) Weather information.
- (iii) Operation of systems (SE).
- (iv) Performance and limitations (SE).
- (v) Airworthiness requirements.

(4) Preflight lesson on a manoeuvre to be performed in flight; including the applicant's knowledge and performance of the following task—

- (i) Manoeuvre lesson

(5) Preflight procedures; including the applicant's knowledge and performance of the following tasks—

- (i) Preflight inspection.
- (ii) Cockpit management.
- (iii) Engine starting.
- (iv) Taxiing (L).
- (v) Taxiing (S).
- (vi) Sailing (S).
- (vii) Before takeoff check.

(6) Aerodrome and seaplane base operations; including the applicant's knowledge and performance of the following tasks—

- (i) Radio communications and ATC light signals.
- (ii) Traffic patterns.
- (iii) Aerodrome and runway markings and lighting.

(7) Takeoffs, landings and go-arounds; including the applicant's knowledge and performance of the following tasks—

- (i) Normal and crosswind takeoff and climb.
- (ii) Short field (Confined area (S)) takeoff and maximum performance climb.

- (iii) Soft field takeoff and climb (SE).
- (iv) Glossy water takeoff and climb (S).
- (v) Rough water takeoff and climb (S).
- (vi) Normal and crosswind approach and landing.
- (vii) Slip to a landing (SE).
- (viii) Go-around/rejected landing.
- (ix) Short field (Confined area (S)) approach and landing.
- (x) Soft field approach and landing (SEL).
- (xi) Power-off 180 degrees accuracy approach and landing (SEL).
- (xii) Glassy water approach and landing (S).
- (xiii) Rough water approach and landing (S).

(8) Fundamentals of flight; including the applicant's knowledge and performance of the following tasks—

- (i) Straight-and-level flight.
- (ii) Level turns.
- (iii) Straight climbs and climbing turns.
- (iv) Straight descents and descending turns.

(9) Performance manoeuvres; including the applicant's knowledge and performance of the following tasks—

- (i) Steep turns.
- (ii) Steep spirals (SE).
- (iii) Chandelles (SE).
- (iv) Lazy eights (SE).

(10) Ground reference manoeuvres; including the applicant's knowledge and performance of the following tasks—

- (i) Rectangular course.
- (ii) S-turns across a road.
- (iii) Turns around a point.
- (iv) Eights on pylons (SE).

(11) Slow flight, stalls and spins; including the applicant's knowledge and performance of the following tasks—

- (i) Manoeuvring during slow flight.
- (ii) Power-on stalls (proficiency).
- (iii) Power-off stalls (proficiency).

- (iv) Crossed-control stalls (demonstration) (SE).
- (v) Elevator trim stalls (demonstration) (SE).
- (vi) Secondary stalls (demonstration) (SE).
- (vii) Spins (SEL).

(12) Basic instrument manoeuvres; including the applicant's knowledge and performance of the following tasks—

- (i) Straight-and-level flight.
- (ii) Constant airspeed climbs.
- (iii) Constant airspeed descents.
- (iv) Turns to headings.
- (v) Recovery from unusual flight attitudes.

(13) Emergency operations (SE); including the applicant's knowledge and performance of the following tasks—

- (i) Emergency approach and landing (simulated).
- (ii) Systems and equipment malfunctions.
- (iii) Emergency equipment and survival gear.

(14) Emergency operations (ME); including the applicant's knowledge and performance of the following tasks—

- (i) Systems and equipment malfunctions.
- (ii) Engine failure during takeoff before VMC.
- (iii) Engine failure after lift-off.
- (iv) Approach and landing with an inoperative engine.
- (v) Emergency descent.
- (vi) Emergency equipment and survival gear.

(15) Multi-engine operations (ME); including the applicant's knowledge and performance of the following tasks—

- (i) Operation of systems.
- (ii) Performance and limitations.
- (iii) Flight principles – engine inoperative.
- (iv) Manoeuvring with one engine inoperative.
- (v) VMC demonstration.
- (vi) Demonstrating the effects of various airspeeds and configurations during engine inoperative performance.

(16) Post-flight procedures; including the applicant's knowledge and performance of the following tasks—

- (i) Post-flight procedures.
- (ii) Anchoring (S).
- (iii) Docking and mooring (S).
- (iv) Beaching (S).
- (v) Ramping (S).

**Standard NO.1.11.2**

**Regulation 89(2)**

***Flight Instruction, Skill Test And Proficiency Check - Helicopter Category.***

The flight instruction, skill test and proficiency check for the flight instructor rating - helicopter shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category, and if applicable, class or type, of aircraft::

(1) Fundamentals of instruction; including the applicant's knowledge and performance of the following tasks—

- (i) The learning process.
- (ii) The teaching process.
- (iii) Teaching methods.
- (iv) Evaluation.
- (v) Flight instructor characteristics and responsibilities.
- (vi) Human factors.
- (vii) Planning instructional activity.

(2) Technical subject areas; including the applicant's knowledge and performance of the following tasks—

- (i) Aeromedical factors.
- (ii) Visual Scanning and collision avoidance.
- (iii) Use of distractions during flight training.
- (iv) Principles of flight.
- (v) Helicopter flight controls.
- (vi) Helicopter weight and balance.
- (vii) Navigation and flight planning.
- (viii) Night operations.
- (ix) Regulations and publications.
- (x) Use of minimum equipment list.

- (xi) National airspace system.
  - (xii) Logbook entries and licence endorsements.
- (3) Preflight preparation including the applicant's knowledge and performance of the following tasks—
- (i) Licences and documents.
  - (ii) Weather information.
  - (iii) Operation of systems.
  - (iv) Performance and limitations.
  - (v) Airworthiness requirements.
- (4) Preflight lesson on a manoeuvre to be performed in flight. including the applicant's knowledge and performance of the following task—
- (i) Manoeuvre lesson.
- (5) Preflight procedures, including the applicant's knowledge and performance of the following tasks—
- (i) Preflight inspection.
  - (ii) Cockpit management.
  - (iii) Engine starting and rotor engagement.
  - (iv) Before takeoff check.
- (6) Aerodrome operations and Heliport operations; including the applicant's knowledge and performance of the following tasks—
- (i) Radio communications and ATC light signals.
  - (ii) Traffic patterns.
  - (iii) Aerodrome and Heliport Markings and lighting.
- (7) Hovering Manoeuvres. including the applicant's knowledge and performance of the following tasks—
- (i) Vertical takeoff and landing.
  - (ii) Surface taxi.
  - (iii) Hover taxi.
  - (iv) Air taxi.
  - (v) Slope operation.
- (8) Takeoffs, landings and go-arounds, including the applicant's knowledge and performance of the following tasks—
- (i) Normal and crosswind takeoff and climb.
  - (ii) Maximum performance takeoff and climb.

- (iii) Rolling takeoff.
- (iv) Normal and crosswind approach.
- (v) Steep approach.
- (vi) Shallow approach and running/roll-on landing.
- (vii) Go-around.

(9) Fundamentals of flight; including the applicant's knowledge and performance of the following tasks—

- (i) Straight-and-level flight.
- (ii) Level turns.
- (iii) Straight climbs and climbing turns.
- (iv) Straight descents and descending turns.

(10) Performance manoeuvres; including the applicant's knowledge and performance of the following tasks—

- (i) Rapid deceleration.
- (ii) Straight-in autorotation.
- (iii) 180 degrees autorotation.

(11) Emergency operations; including the applicant's knowledge and performance of the following tasks—

- (i) Power failure at a hover.
- (ii) Power failure at altitude.
- (iii) Settling-with-power.
- (iv) Low rotor RPM recovery.
- (v) Antitorque system failure.
- (vi) Dynamic rollover.
- (vii) Ground resonance.
- (viii) Low "G" conditions.
- (ix) Systems and equipment malfunctions.
- (x) Emergency equipment and survival gear.

(12) Special operations; including the applicant's knowledge and performance of the following tasks—

- (i) Confined area operation.
- (ii) Pinnacle/platform operation.

(13) Post-flight procedures; including the applicant's knowledge and performance of the following tasks—

- (i) After-landing and securing.

### **Standard NO.1.11.3**

#### **Regulation 89(2)**

#### ***Flight Instruction, Skill Test And Proficiency Check - Airship Category.***

The flight instruction, skill test and proficiency check for the flight instructor rating - airship shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category of aircraft:

(1) Fundamentals of instruction; including the applicant's knowledge and performance of the following tasks—

- (i) The learning process.
- (ii) The teaching process.
- (iii) Teaching methods.
- (iv) Evaluation.
- (v) Flight instructor characteristics and responsibilities.
- (vi) Human factors.
- (vii) Planning instructional activity.

(2) Technical subject areas; including the applicant's knowledge and performance of the following tasks—

- (i) Aeromedical factors.
- (ii) Visual Scanning and collision avoidance.
- (iii) Use of distractions during flight training.
- (iv) Principles of flight.
- (v) Airship weight-off, ballast, and trim.
- (vi) Night operations.
- (vii) Regulations and publications.
- (viii) National airspace system.
- (ix) Logbook entries and licence endorsement.

(3) Preflight preparation, including the applicant's knowledge and performance of the following tasks—

- (i) Licences and documents.
- (ii) Weather information.
- (iii) Cross-country flight planning.



- (iv) Performance and limitations.
  - (v) Operations of systems.
- (4) Preflight lesson on a manoeuvre to be performed in flight, including the applicant's and performance of the following tasks—
- (i) Manoeuvre lesson.
- (5) Preflight procedures, including the applicant's knowledge and performance of the following tasks—
- (i) Preflight inspection.
  - (ii) Cockpit management.
  - (iii) Engine starting.
  - (iv) Unmasting and positioning for takeoff.
  - (v) Ground handling.
  - (vi) Before takeoff check.
- (6) Aerodrome operations, including the applicant's knowledge and performance of the following tasks—
- (i) Radio communications.
  - (ii) Traffic pattern operations.
  - (iii) Aerodrome, runway and taxiway markings and lighting.
- (7) Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—
- (i) Flight to, from, and at pressure height.
  - (ii) In-flight weigh-off.
  - (iii) Manual pressure control.
  - (iv) Static and dynamic trim.
- (8) Navigation, including the applicant's knowledge and performance of the following tasks—
- (i) Pilotage and dead reckoning.
  - (ii) Diversion.
  - (iii) Lost procedures.
  - (iv) Navigation systems and air traffic control radar services.
- (9) Basic instrument manoeuvres, including the applicant's knowledge and performance of the following tasks—
- (i) Straight-and level flight.
  - (ii) Constant airspeed climbs.
  - (iii) Constant airspeed descents.

- (iv) Turns to headings.
- (v) Recovery from unusual flight attitudes.

(10) Emergency operations, including the applicant's knowledge and performance of the following tasks—

- (i) Aborted takeoff.
- (ii) Engine failure during takeoff.
- (iii) Engine failure during flight.
- (iv) Engine fire during flight.
- (v) Envelope emergencies.
- (vi) Free ballooning.
- (vii) Ditching and emergency landing.
- (viii) Systems and equipment malfunctions.

(11) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—

- (i) Mastings.
- (ii) Post-masting.

#### **Standard NO.1.11.4**

##### **Regulation 89(2)**

##### ***Flight Instruction, Skill Test And Proficiency Check-Balloons.***

The flight instruction, skill test and proficiency check for the flight instructor licence with balloon instructor rating shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category and class of aircraft:

Note: When (BH) is indicated, the item is for hot air balloons only. When (BG) is indicated, the item is for gas balloons.

(1) Fundamentals of instruction; including the applicant's knowledge and performance of the following tasks—

- (i) The learning process.
- (ii) The teaching process.
- (iii) Teaching methods.
- (iv) Evaluation.
- (v) Flight instructor characteristics and responsibilities.
- (vi) Human factors.
- (vii) Planning instructional activity.

(2) Technical subject areas; including the applicant's knowledge and performance of the following tasks—

- (i) Aeromedical factors.
- (ii) Visual Scanning and collision avoidance.
- (iii) Use of distractions during flight training.
- (iv) Principles of flight.
- (v) Regulations and publications.
- (vi) National airspace system.
- (vii) Logbook entries and licence endorsement.

(3) Preflight preparation, including the applicant's knowledge and performance of the following tasks—

- (i) Licences and documents.
- (ii) Weather information.
- (iii) Cross-country flight planning.
- (iv) Performance and limitations.
- (v) Operations of systems.

(4) Preflight lesson on a manoeuvre to be performed in flight, including the applicant's and performance of the following tasks—

- (i) Manoeuvre lesson.

(5) Preflight procedures, including the applicant's knowledge and performance of the following tasks—

- (i) Launch site selection.
- (ii) Crew briefing and preparation.
- (iii) Layout and assembly.
- (iv) Preflight inspection.
- (v) Inflation.
- (vi) Basket/gondola management.
- (vii) Pre-launch check.

(6) Aerodrome operations, including the applicant's knowledge and performance of the following tasks—

- (i) Radio communications.

(7) Launches and landings, including the applicant's knowledge and performance of the following tasks—

- (i) Normal launch.
- (ii) Launch over obstacle.
- (iii) Approach to landing.

- (iv) Steep approach to landing.
- (v) Normal landing.
- (vi) High-wind landing.

(8) Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—

- (i) Ascents.
- (ii) Altitude control (level flight).
- (iii) Descents.
- (iv) Rapid ascent and descent.
- (v) Contour flying (BH).
- (vi) High altitude flight (BG).
- (vii) Obstacle avoidance (BH).
- (viii) Tethering (BH).
- (ix) Winter flying.
- (x) Mountain flying.

(9) Navigation, including the applicant's knowledge and performance of the following tasks—

- (i) Navigation.

(10) Emergency operations, including the applicant's knowledge and performance of the following tasks—

- (i) Systems and equipment malfunctions.
- (ii) Emergency equipment and survival gear.
- (iii) Water landing.
- (iv) Thermal flight.

(11) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—

- (i) Recovery.
- (ii) Deflation and pack-up.
- (iii) Refueling (BH).

### **Standard NO.1.11.5**

#### **Regulation 89(2)**

#### ***Flight Instruction, Skill Test And Proficiency Check-Gliders.***

The flight instruction, skill test and proficiency check for the flight instructor rating - glider shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category of aircraft:

(1) Fundamentals of instruction; including the applicant's knowledge and performance of the following tasks—

- (i) The learning process.
- (ii) The teaching process.
- (iii) Teaching methods.
- (iv) Evaluation.
- (v) Flight instructor characteristics and responsibilities.
- (vi) Human factors.
- (vii) Planning instructional activity.

(2) Technical subject areas; including the applicant's knowledge and performance of the following tasks—

- (i) Aeromedical factors.
- (ii) Visual Scanning and collision avoidance.
- (iii) Use of distractions during flight training.
- (iv) Principles of flight.
- (v) Elevators, ailerons, and rudder.
- (vi) Trim, lift and drag devices.
- (vii) Glider weight and balance.
- (viii) Navigation and flight planning.
- (ix) Regulations and publications.
- (x) National airspace system.
- (xi) Logbook entries and licence endorsements.

(3) Preflight preparation; including the applicant's knowledge and performance of the following tasks—

- (i) Licences and documents.
- (ii) Weather information.
- (iii) Operation of systems.
- (iv) Performance and limitations.

(4) Preflight lesson on a manoeuvre to be performed in flight; including the applicant's knowledge and performance of the following task—

- (i) Manoeuvre lesson.

(5) Preflight procedures; including the applicant's knowledge and performance of the following tasks—

- (i) Assembly.

- (ii) Ground handling.
- (iii) Preflight inspection.
- (iv) Cockpit management.
- (v) Visual signals.

(6) Aerodrome operations and gliderport operations; including the applicant's knowledge and performance of the following tasks—

- (i) Radio communications.
- (ii) Traffic patterns.
- (iii) Aerodrome, runway, and taxiway signs, markings and lighting.

(7) Launches— aero tow, including the applicant's knowledge and performance of the following tasks:

- (i) Before takeoff checks.
- (ii) Normal and crosswind takeoff.
- (iii) Maintaining tow positions.
- (iv) Slack line.
- (v) Boxing the wake.
- (vi) Tow release.
- (vii) Abnormal occurrences.

(8) Launches— ground tow (auto or winch), including the applicant's knowledge and performance of the following tasks—

- (i) Before takeoff check.
- (ii) Normal and crosswind takeoff.
- (iii) Abnormal occurrences.

(9) Launches— self-launch, including the applicant's knowledge and performance of the following tasks—

- (i) Engine starting.
- (ii) Taxiing.
- (iii) Before takeoff check.
- (iv) Normal and crosswind takeoff and climb.
- (v) Engine shutdown in flight.
- (vi) Abnormal occurrences.

(10) Landings, including the applicant's knowledge and performance of the following tasks—

- (i) Normal and cross wind landing.
- (ii) Slips to landing.

(iii) Downwind landing.

(11) Fundamentals of flight, including the applicant's knowledge and performance of the following tasks—

(i) Straight glides.

(ii) Turns to headings.

(12) Performance airspeeds, including the applicant's knowledge and performance of the following tasks—

(i) Minimum sink airspeed.

(ii) Speed-to-fly.

(13) Soaring techniques, including the applicant's knowledge and performance of the following tasks—

(i) Thermal soaring.

(ii) Ridge and slope soaring.

(iii) Wave soaring.

(14) Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—

(i) Steep turns

(ii) Recovery from a spiral dive.

(15) Slow flight and stalls, including the applicant's knowledge and performance of the following tasks—

(i) Manoeuvring at minimum control airspeed.

(ii) Stall recognition and recovery.

(iii) Spins.

(16) Emergency operations, including the applicant's knowledge and performance of the following tasks—

(i) Simulated off-aerodrome landing.

(ii) Emergency equipment and survival gear.

(17) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—

(i) After-landing and securing.

## **Standard NO.1.11.6**

### **Regulation 89(2)**

#### ***Flight Instruction, Skill Test And Proficiency Check-Flight Instructor for Instrument Ratings (Aeroplane, helicopter, and Power Lift).***

The flight instruction, skill test and proficiency for the flight instructor for instrument ratings – aeroplane, helicopter and powered-lift shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category, and if applicable class, of aircraft:

Note: When (SE) is indicated the item or paragraph is only for single-engine, when (ME) is indicated the item or paragraphs is only for multi-engine. When nothing is indicated the item and paragraph are for single-engine and multi-engine.

Note: When (A) is indicated the item or paragraph is only for Aeroplane. When (H) is indicated the item or paragraph is only for Helicopter. When nothing is indicated the item and the paragraph are for all categories.

(1) Fundamentals of instructing; including the applicant's knowledge and performance of the following tasks—

- (i) The learning process.
- (ii) Human behaviour and effective communication.
- (iii) The teaching process.
- (iv) Teaching methods.
- (v) Critique and evaluation.
- (vi) Flight instructor characteristics and responsibilities.
- (vii) Planning instructional activity.

(2) Technical subject areas; including the applicant's knowledge and performance of the following tasks—

- (i) Aircraft flight instruments and navigation equipment.
- (ii) Aeromedical factors.
- (iii) Regulations and publications related to IFR operations.
- (iv) Logbook entries related to instrument instruction.

(3) Preflight preparation; including the applicant's knowledge and performance of the following tasks—

- (i) Weather information.
- (ii) Cross-country flight planning.
- (iii) Instrument cockpit check.

(4) Preflight lesson on a manoeuvre to be performed in flight; including the applicant's knowledge and performance of the following task—

- (i) Manoeuvre lesson.



- (5) Air traffic control clearances and procedures; including the applicant's knowledge and performance of the following tasks—
- (i) Air traffic control clearances.
  - (ii) Compliance with departure, en-route and arrival procedures and clearances.
- (6) Flight by reference to instruments; including the applicant's knowledge and performance of the following tasks—
- (i) Straight-and-level flight.
  - (ii) Turns.
  - (iii) Change of airspeed in straight-and-level and turning flight.
  - (iv) Constant airspeed climbs and descents.
  - (v) Constant rate climbs and descents.
  - (vi) Timed turns to magnetic compass headings.
  - (vii) Steep turns.
  - (viii) Recovery from unusual flight altitudes.
- (7) Navigation systems; including the applicant's knowledge and performance of the following tasks—
- (i) Intercepting and tracking navigational systems and DME Arcs.
  - (ii) Holding procedures.
- (8) Instrument approach procedures; including the applicant's knowledge and performance of the following tasks—
- (i) Non-precision instrument approach.
  - (ii) Precision instrument approach.
  - (iii) Missed approach.
  - (iv) Circling approach (A).
  - (v) Landing from a straight-in approach.
- (9) Emergency operations; including the applicant's knowledge and performance of the following tasks—
- (i) Loss of communications.
  - (ii) Loss of gyro attitude and heading indicators.
  - (iii) Engine failure during straight-and-level flight and turns.
  - (iv) Instrument approach – one engine inoperative.
- (10) Post-flight procedures; including the applicant's knowledge and performance of the following task—
- (i) Checking instruments and equipment.

**Standard NO 1.12.: -FLIGHT ENGINEER LICENCE KNOWLEDGE REQUIREMENTS  
REGULATION 108**

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

***Air law***

a) rules and regulations relevant to the holder of a flight engineer licence; rules and regulations governing the operation of civil aircraft pertinent to the duties of a flight engineer;

***Aircraft general knowledge***

b) basic principles of powerplants, gas turbines and/or piston engines; characteristics of fuels, fuel systems including fuel control; lubricants and lubrication systems; afterburners and injection systems, function and operation of engine ignition and starter systems;

c) principles of operation, handling procedures and operating limitations of aircraft powerplants; effects of atmospheric conditions on engine performance;

d) airframes, flight controls, structures, wheel assemblies, brakes and anti-skid units, corrosion and fatigue life, identification of structural damage and defects;

e) ice and rain protection systems;

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

g) hydraulic and pneumatic systems;

h) basic electrical theory, electric 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, displays and avionics;

j) limitations of appropriate aircraft;

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

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

***Flight performance, planning and loading***

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

n) use and 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;

***Operational procedures***

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

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) communication procedures and phraseology.

## **Flight Engineer Knowledge Requirements to Operate Radiotelephone on Board an Aircraft**

2. Where the applicant has met the requirements pertinent to the operation of the radiotelephone on board an aircraft, the Director may endorse the airman licence for the operation of such radiotelephone.

### ***Standard NO 1.12.1.***

### **Regulation 108**

### **FLIGHT INSTRUCTION, SKILL TEST AND PROFICIENCY CHECK**

The flight instruction, skill test and proficiency check for the flight engineer licence shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category of aircraft:

- (1) Preflight preparation; including the applicant's knowledge and performance of the following tasks—
  - (i) Equipment examination-systems knowledge.
  - (ii) Aircraft handbooks, manuals, minimum equipment list (MEL), configuration deviation list (CDL) and operations specifications.
  - (iii) Performance and limitations.
- (2) Preflight procedures; including the applicant's knowledge and performance of the following tasks—
  - (i) Preflight inspection and cockpit setup.
  - (ii) Preflight inspection-exterior.
- (3) Ground operations; including the applicant's knowledge and performance of the following tasks—
  - (i) Powerplant start.
  - (ii) Taxi and pre-takeoff checks.
- (4) Normal procedures; including the applicant's knowledge and performance of the following tasks—

- (i) Takeoff.
  - (ii) In-flight.
  - (iii) During approach and landing.
  - (iv) Engine systems monitoring.
- (5) Abnormal and emergency procedures; including the applicant's knowledge and performance of the following tasks—
- (i) Takeoff.
  - (ii) In-flight.
  - (iii) During approach and landing.
  - (iv) Engine systems monitoring.
- (6) Postflight procedures.
- (i) After landing.
  - (ii) Parking and securing.

**Standard NO: 1.13: TRAINING AND TESTING REQUIRMENTS FOR LICENCES  
Regulation 115–117**

**Standard NO: 1.13.1**

**Procedures for Minimum Training and Skill Test Standards for an Airman Licence**

The following procedures meet the minimum training and skill test standards for an airman licence:

(a) except as provided in paragraph (b), to be eligible for a skill test for a licence or rating issued under these Regulations, an applicant shall—

(i) pass the required knowledge test within the twenty-four calendar-month period preceding the month the applicant completes the skill test, if a knowledge test is required;

(ii) present the knowledge test report at the time of application for the skill test, if a knowledge test is required;

(iii) have satisfactorily accomplished the required training and obtained the aeronautical experience prescribed by these Regulations for the licence or rating sought;

(iv) meet the prescribed age requirement of this subpart for the issuance of the licence or rating sought; and

(v) have an endorsement in his or her logbook or training record that has been signed by an authorized instructor who certifies that the applicant—

(A) has received and logged training time within sixty days preceding the date of application in preparation for the skill test;

(B) is prepared for the required skill test; and

(C) has demonstrated satisfactory knowledge of the subject areas in which the applicant was deficient on the airman knowledge test;

(b) an applicant for an Airline Transport Pilot Licence or an additional rating to an airline transport licence may take the Skill test for that licence or rating with an expired knowledge test report, provided that the applicant is employed as a—

(i) is employed as a flight crew member by a certificate holder under *Civil Aviation (Air Operator Certification and Administration) Regulations 2007* at the time of the Skill test and has satisfactorily accomplished that operator's approved—

(A) pilot in command aircraft qualification training program that is appropriate to the licence and rating sought; and

(B) Qualification training requirements appropriate to the licence and rating sought; or

(c) is employed as a flight crew member in scheduled military air transport operations of Barbados at the time of the Skill test, and has accomplished the pilot in command aircraft qualification-training program that is appropriate to the licence and rating sought.

**Standard NO: 1.13.2*****Required Aircraft Simulation and Equipment***

Except as provided in subparagraph (ii), or when permitted to accomplish the entire flight increment of the Skill test in an approved flight simulator or an approved flight training device, an applicant for a licence or rating shall furnish—

(i) an aircraft of Barbados registry for each required test that—

(A) is of the category, class, and type, if applicable, applicable to the licence or rating sought; and

(B) has a current standard, limited, or primary airworthiness certificate;

(ii) at the discretion of the Flight Test Examiner who administers the Skill test, the applicant may furnish—

(A) an aircraft that has a current airworthiness certificate other than standard, limited, or primary but that otherwise meets the requirement of paragraph (i);

(B) an aircraft of the same category, class, and type, if applicable, of foreign registry that is properly certified by the country of registry; or

(C) a military aircraft of the same category, class, and type, if applicable, for which the applicant is applying for a licence or rating.

**Standard NO: 1.13.3*****Required Equipment-Excluding Controls***

Each applicant for a skill test shall use an aircraft that has—

(i) the equipment for each area of operation required for the Skill test;

(ii) no prescribed operating limitations that prohibit its use in any of the areas of operation required for the skill test;

(iii) except as provided in PART F, at least two pilot stations with adequate visibility for each person to operate the aircraft safely; and

(iv) cockpit and outside visibility adequate to evaluate the performance of the applicant when an additional jump seat is provided for the Flight Test Examiner.

**Standard NO: 1.13.4*****Required controls***

Each applicant for a skill test shall use an aircraft (other than a lighter-than-air aircraft) that has engine power controls and flight controls that are easily reached and operable in a conventional manner by both pilots, unless the Flight Test Examiner determines that the skill test can be conducted safely in the aircraft without the controls being easily reached.

**Standard NO: 1.13.5**

***Simulated instrument flight equipment***

An applicant for a skill test that involves manoeuvring an aircraft solely by reference to instruments shall furnish—

- (i) equipment on board the aircraft that permits the applicant to pass the areas of operation that apply to the rating sought; and
- (ii) a device that prevents the applicant from having visual reference outside the aircraft, but does not prevent the Flight Test Examiner from having visual reference outside the aircraft, and is otherwise acceptable to the Director.

**Standard NO: 1.13.6**

***Aircraft with single controls***

An applicant may complete a skill test in an aircraft having a single set of controls, provided the—

- (i) examiner agrees to conduct the test;
- (ii) test does not involve a demonstration of instrument skills; and
- (iii) proficiency of the applicant can be observed by an Flight Test Examiner who is in a position to observe the applicant.

**Standard NO:-1.14-RECORDING AND RETENTION OF FLIGHT TRAINING AND AERONAUTICAL EXPERIENCE RECORDS**

**Regulation 120**

The following are the minimum standards for the recording and retention of flight training and aeronautical experience records :

(a) for the purposes of meeting the requirements of Regulation 112, each person shall enter the following information for each flight or lesson logged—

(i) General:

(A) date.

(B) total flight time.

(C) location where the aircraft departed and arrived, or for lessons in an approved flight simulator or an approved flight training device, the location where the lesson occurred.

(D) type and identification of aircraft, approved flight simulator, or approved flight training device, as appropriate.

(E) the name of a safety pilot, if required by the Act or regulations made thereunder.

(ii) type of pilot experience or training—

(A) solo.

(B) pilot in command.

(C) co-pilot.

(D) flight and ground training received from an authorized instructor.

(E) training received in an approved flight simulator or approved flight training device from an authorized instructor.

(iii) conditions of flight—

(A) day or night.

(B) actual instrument.

(C) simulated instrument conditions in flight, an approved flight simulator, or an approved flight training device.

(b) Logging of pilot time:

The pilot time described in this subparagraph may be used to—

(i) apply for a licence or rating issued under these regulations; or

(ii) satisfy the recent flight experience requirements of the Act or Regulations made thereunder.

(c) Logging of solo flight time.

Except for a student pilot acting as pilot in command of an airship requiring more than one flight crewmember, a pilot may log as solo flight time only that flight time when the pilot is the sole occupant of the aircraft.

(d) Logging pilot in command flight time.

(i) a private or commercial pilot may log pilot in command time only for that flight time during which that person is—



- (A) the sole manipulator of the controls of an aircraft for which the pilot is rated;
- (B) acting as pilot 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; or
- (C) a sole occupant.

(ii) an airline transport pilot may log as pilot in command time all of the flight time while acting as pilot in command of an operation requiring an Airline Transport Pilot Licence.

(iii) an authorized instructor may log as pilot in command time all flight time while acting as an authorized instructor.

(iv) a student pilot may log pilot in command time when the student pilot—

- (A) is the sole occupant of the aircraft or is performing functions of the pilot in command of an aircraft requiring more than one flight crewmember
- (B) has a current solo flight endorsement as required under Regulation 27; or
- (C) is undergoing training for a pilot licence or rating.

(e) Logging co-pilot flight time.

A person may log co-pilot flight time only for that flight time during which that person—

- (A) is qualified in accordance with the co-pilot requirements of the Act or regulations made thereunder, and occupies a crewmember station in an aircraft that requires more than one pilot by the aircraft's type certificate; or
- (B) holds the appropriate category, class, and instrument rating (if an instrument rating is required for the flight) for the aircraft being flown, and more than one pilot is required under the type certification of the aircraft or the regulations under which the flight is being conducted.

(f) Logging instrument flight time.

- (A) a person may log instrument flight time only for that flight time when the person operates the aircraft solely by reference to instruments under actual or simulated instrument flight conditions; and
- (B) an authorized instructor may log instrument flight time when conducting instrument flight instruction in actual instrument flight conditions;
- (C) for the purposes of logging instrument flight time to meet the recent instrument experience requirements of the Act or Regulations made thereunder, the following information shall be recorded in a person's logbook—
  - (I) the location and type of each instrument approach accomplished; and
  - (II) the name of the safety pilot, if required;
- (D) an approved flight simulator or approved flight training device may be used by a person to log instrument flight time, provided an authorized instructor is present during the simulated flight.

(g) Logging training time.

(i) a person may log training time when that person receives training from an authorized instructor in an aircraft, approved flight simulator, or approved flight training device.

(ii) the training time shall be logged in a logbook and shall—

- (A) be endorsed in a legible manner by the authorized instructor; and

(B) include a description of the training given, the length of the training lesson, and the instructor's signature, licence number, and licence expiration date.

## ***Standard NO:1.15 -AIR TRAFFIC CONTROLLER LICENCE REQUIREMENTS***

### **Standard NO:1.15.1**

#### **Regulation 130**

##### ***Aeronautical Knowledge Requirements for an Air Traffic Controller Licence***

The following aeronautical knowledge areas are required for an applicant for an Air Traffic Controller licence and initial validation:

- (a) rules and regulations of air law relevant to the Air Traffic Controller including the flight rules prescribed by the Director;
- (b) principles, use and limitations of equipment used in air traffic control;
- (c) general aircraft knowledge including—
  - (i) principles of flight;
  - (ii) principles of operations and functioning of aircraft, powerplants and systems; and
  - (iii) aircraft performances relevant to air traffic control operations;
- (d) human performance and limitations relevant to air traffic control;
- (e) meteorology including—
  - (i) aeronautical meteorology;
  - (ii) use and appreciation of meteorological documentation and information;
  - (iii) origin and characteristics of weather phenomena affecting flight operations and safety; and
  - (iv) altimetry;
- (f) navigation, including the—
  - (i) principles of air navigation; and
  - (ii) principle, limitation and accuracy of navigational systems and visual aids; and
- (g) operational procedures including—
  - (i) air traffic control, communication, radiotelephony and routine, nonroutine and emergency phraseology procedures;
  - (ii) use of the relevant meteorological documentation; and
  - (iii) safety practices associated with flight.

### **Standard NO:1.15.2**

#### **Regulation 130**

##### ***Aeronautical Knowledge Requirements For Air Traffic Controller Ratings***

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 control 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 service, as appropriate, including procedures to ensure appropriate terrain clearance.

### **Standard NO:1.15.3**

#### **Regulation 131**

#### **Skills Test for an Air Traffic Trainee Licence**

The following are the areas of operation required to be performed for the skills test for an Air Traffic Trainee Licence:

- (a) safety of operation;
- (b) separation;
- (c) expedition and orderliness;
- (d) method and application of Air Traffic Procedures and Practices;

- (e) standard Chicago Convention phraseology;
- (f) co-ordination and communication;
- (g) correct use of equipment;
- (h) emergency and abnormal situations; and
- (i) impact of weather conditions on aircraft operations.

**Standard NO:1.15.4**

**Regulation 137(1)(a)**

***Training Course Requirements for an Air Traffic Controller Licence***

An applicant for an Air Traffic Controller Licence and initial validation under Regulation 131 shall satisfactorily complete a training course in the following areas, in respect of the rating sought:

- (a) aerodrome Control Ratings in— aerodrome layout, physical characteristics and visual aids, airspace structure, applicable rules, procedures and source of information, air navigation facilities, air traffic control equipment and use, terrain and prominent landmarks, characteristics of air traffic, weather phenomena, emergency and search and rescue plan;
- (b) approach Control Ratings in— airspace structure, applicable rules, procedures and source of information, air navigation facilities, air traffic control equipment and use, terrain and prominent landmarks, characteristics of air traffic and traffic flow, weather phenomena, emergency and search and rescue plan;
- (c) approach Control Radar Rating which in addition to the training in approach control rating shall include training in— principles, use and limitations of radar, other surveillance systems and associated equipment, procedures for the provision of approach radar control service including procedures to ensure appropriate terrain clearances;
- (d) area Control Ratings in— airspace structure, applicable rules, procedures and source of information, air navigation facilities, air traffic control equipment and use, terrain and prominent landmarks, characteristics of air traffic and traffic flow, weather phenomena including high altitude weather, emergency and search and rescue plan; and
- (e) area Control Rating which in addition to the training in area control rating shall include training in— principles, uses and limitation of radar, other surveillance systems and associated equipment, procedures for the provision of area control radar service.

**Standard NO:1.15.5**

**Regulation 137(1)(b)**

***Experience Requirements for an Air Traffic Control Licence***

An applicant for an Air Traffic Controller Licence and initial validation under Regulation 129 shall have met the following experience requirements in respect of the specific rating sought:

- (a) aerodrome Control Rating—an aerodrome control service for at least ninety hours or one month whichever is the greater, providing the service at the aerodrome for which the rating is sought;
- (b) approach Control, Approach Control Radar, Area Control, Area Control Radar Ratings—the control service for which the rating is sought, for at least one hundred and eighty hours or three months whichever is the greater, providing the service at the unit for which the rating is sought; or
- (c) concurrent Aerodrome and Approach Control Rating—the combined service for which the ratings are sought, for at least one hundred and eighty hours or three months whichever is the greater, providing the combined service at the same operating position at the unit for which the rating is sought.

**Standard NO. 1.16 -FLIGHT OPERATIONS OFFICER AUTHORISATION  
REQUIREMENTS  
Regulation 149 (2)(c), 150(2)**

**Standard NO. 1.16.1  
Regulation 149(2)(c)**

***Aeronautical knowledge requirements for Flight Operations Officer Authorisation***

An applicant for a Flight Operations Officer Authorization under Regulation 149 shall meet the following aeronautical knowledge requirements:

- (a) rules and regulations relevant to the holder of a flight operations officer licence; and
- (b) appropriate Air Traffic Control practices and procedures;
- (c) aircraft general knowledge including—
  - (i) principles of operation of aeroplane powerplants, systems and instruments;
  - (ii) operating limitations of aeroplanes and powerplants; and
  - (iii) minimum equipment list;
- (d) flight performance calculation and planning procedures including—
  - (i) effects of loading and mass distribution on aircraft performance and flight characteristics;
  - (ii) mass and balance calculations;
  - (iii) operational flight planning;
  - (iv) fuel consumption and endurance calculations;
  - (v) alternate airport selection procedures; and
  - (vi) en-route cruise control;
- (e) operational procedures including—
  - (i) use of aeronautical documentation;
  - (ii) operational procedures for the carriage of freight and dangerous goods;
  - (iii) procedures relating to aircraft accidents, incidents and emergency flight procedures; and
  - (iv) procedures relating to unlawful interference and sabotage of aircraft;
- (f) navigation, including principles of air navigation with particular reference to instrument flight;
- (g) principles of flight relating to the appropriate category of aircraft; and
- (h) radio communication, including procedures for communicating with aircraft and relevant ground stations.

**Standard NO. 1.16.2**

**Regulation 150(2)**

***Training Syllabus for Flight Operations Officer Authorization***

The training syllabus for an applicant for a Flight Operations Officer Authorization shall include the following:

**PHASE 1—BASIC AERONAUTICAL KNOWLEDGE**

(a) civil air law and regulations—

- (i) certification of operators;
- (ii) the Convention on International Civil Aviation (The Chicago Convention);
- (iii) international air transport issues addressed by the Chicago Convention;
- (iv) the International Civil Aviation Organization (ICAO);
- (v) responsibility for aircraft airworthiness;
- (vi) regulatory provisions of the flight manual;
- (vii) the aircraft minimum equipment list; and
- (viii) the operations manual;

(b) aviation indoctrination—

- (i) regulatory;
- (ii) aviation terminology and terms of reference;
- (iii) theory of flight and flight operations;
- (iv) aircraft propulsion systems; and
- (v) aircraft systems;

(c) aircraft mass (weight) and performance—

- (i) basic principles for flight safety;
- (ii) basic mass (weight) and speed limitations;
- (iii) take-off runway requirements;
- (iv) climb performance requirements;
- (v) landing runway requirements; and
- (vi) buffet boundary speed limitations;

(d) navigation—

- (i) position and distance time;
- (ii) true, magnetic and compass direction; gyro heading reference and grid direction;



- (iii) introduction to chart projection: the Mercator projection; great circles on Mercator charts; other cylindrical projections; Lambert conformal conic projections; the polar stereographic projection;
- (iv) International Civil Aviation Organization chart requirements;
- (v) charts used by a typical operator;
- (vi) measurement of airspeed; track and ground speed;
- (vii) use of slide-rules, computers and scientific calculators;
- (viii) measurement of aircraft altitude;
- (ix) point of no return; critical point; general determination of aircraft position;
- (x) introduction to radio navigation; ground-based radar and directionfinding stations; relative bearings; VOR/DME-type radio navigation; instrument landing systems;
- (xi) navigation procedures; and
- (xii) International Civil Aviation Organization Communications Navigation Surveillance and Air Traffic Management Systems (an overview);

(e) air traffic management—

- (i) introduction to air traffic management;
- (ii) controlled airspace;
- (iii) flight rules;
- (iv) Air Traffic Clearance; Air Traffic Control requirements for flight plans; aircraft Reports;
- (v) flight information service (FIS);
- (vi) alerting service and search and rescue;
- (vii) communications services (mobile, fixed);
- (viii) aeronautical information service (AIS); and
- (ix) aerodrome and airport services;

(f) meteorology—

- (i) atmosphere; atmospheric temperature and humidity;
- (ii) atmospheric pressure; pressure-wind relationships;
- (iii) winds near the Earth's surface; wind in the free atmosphere turbulence;
- (iv) vertical motion in the atmosphere; formation of clouds and precipitation;
- (v) thunderstorms; aircraft icing;
- (vi) visibility and runway visual range; volcanic ash;
- (vii) surface observations; upper-air observations; station model;

- (viii) air masses and fronts; frontal depressions;
  - (ix) weather at fronts and other parts of the frontal depression; other types of pressure systems;
  - (x) general climatology; weather in the tropics;
  - (xi) aeronautical meteorological reports; analysis of surface and upperair charts;
  - (xii) prognostic charts; aeronautical forecasts;
  - (xiii) meteorological service for international air navigation; and
  - (xiv) field trip to local meteorological office;
- (g) mass (weight) and balance control—
- (i) introduction to mass and balance;
  - (ii) load planning;
  - (iii) calculation of payload and load sheet preparation;
  - (iv) aircraft balance and longitudinal stability;
  - (v) moments and balance;
  - (vi) the structural aspects of aircraft loading;
  - (vii) dangerous goods and other special cargo; and
  - (viii) issuing loading instructions;
- (h) transport of dangerous goods by air—
- (i) introduction;
  - (ii) dangerous goods, emergency and abnormal situations;
  - (iii) source documents;
  - (iv) responsibilities; and
  - (v) emergency procedures;
  - (i) flight planning—
    - (i) introduction to flight planning;
    - (ii) turbo-jet aircraft cruise control methods;
    - (iii) flight planning charts and tables for turbo-jet aircraft;
    - (iv) calculation of flight time and minimum fuel for turbo-jet aircraft;
    - (v) route selection;
    - (vi) flight planning situations;
    - (vii) re-clearance;
    - (viii) the flight phases;

- (ix) documents to be carried on flights;
  - (x) flight planning exercises;
  - (xi) threats and hijacking; and
  - (xii) ETOPS;
- (j) flight monitoring—
- (i) position of aircraft;
  - (ii) effects of Air Traffic Control re-routing;
  - (iii) flight equipment failures;
  - (iv) en-route weather changes;
  - (v) emergency situations;
  - (vi) flight monitoring resources;
  - (vii) position reports; and
  - (viii) ground resource availability;
- (k) communications—Radio—
- (i) international aeronautical telecommunications service;
  - (ii) elementary radio theory;
  - (iii) aeronautical fixed service;
  - (iv) aeronautical mobile service;
  - (v) radio navigation service;
  - (vi) radiotelephony procedures and phraseology; action to be taken in case of communication failure; and
  - (vii) automated aeronautical service;
- (l) human factors—
- (i) the meaning of Human Factors;
  - (ii) dispatch resource management;
  - (iii) awareness;
  - (iv) practice and feedback;
  - (v) reinforcement;
- (m) security (emergencies and abnormal situations)—
- (i) familiarity;
  - (ii) security measures taken by operators;
  - (iii) procedures for handling threats, bomb scares, etc.;
  - (iv) emergency due to dangerous goods;

- (v) hijacking;
- (vi) emergency procedures; and
- (vii) personal security for the Flight Operations Officer.

PHASE TWO—APPLIED PRACTICAL TRAINING AND TESTING—

(a) applied Practical Training and Demonstration of Skills—

- (i) applied practical flight operations;
- (ii) simulator Line Orientation Flight Training observation and synthetic flight training;
- (iii) flight dispatch practices (on-the-job training);
- (iv) the candidate shall demonstrate to the operator, knowledge of—
  - (A) the contents of the operations manual;
  - (B) the radio and navigation equipment in the aircraft used;
- (v) the candidate shall demonstrate to the operator knowledge of the following details concerning operations for which he will be responsible and areas in which he will be authorized to exercise flight supervision:
  - (A) the seasonal meteorological conditions and the sources of meteorological information;
  - (B) the effects of meteorological conditions on radio reception in the aircraft used;
  - (C) the peculiarities and limitations of each navigation system which is used in the operations; and
  - (D) the aircraft loading instructions;
- (vi) the candidate shall demonstrate to the operator the ability to perform the duties specified in the regulations;

(b) competency testing the candidate shall demonstrate by passing a knowledge and skills test based on this syllabus, his competency to operate as Flight Operations Officer;

(c) to 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 neighbourhood of a specific air route; particular reference to destination and alternates;

(d) to determine the optimum flight path for a given segment, and create accurate manual and computer generated flight plans; and

(e) to 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 licence;

(f) assignment to duty—

(i) before assignment to duty, the candidate will be required to obtain Flight Operations Officer authorization from the Director, based on the requirements of the Regulations and submission of his competency certificate as proof of having successfully completed an approved course of training and testing; and

(ii) Flight Operations Officer shall not be assigned to duty unless within the preceding twelve months he has made at least a one-way qualification flight on the flight deck of an aircraft over an area in which he is authorized to exercise supervision.

**Standard NO: -1.17-MEDICAL REQUIREMENTS**

**Regulation 166**

<i>Medical Class 1</i>	<i>Medical Class 2</i>	<i>Medical Class 3</i>
<p>This class applies to the issue or revalidation of: Airline Transport Pilot Licence, Commercial Pilot Licence , Flight Engineer Licence</p>	<p>This class applies to the issue or revalidation of : Private Pilot Licence Student Pilot Licence Balloon Pilot Licence Glider Pilot Licence</p>	<p>This class applies to the issue or revalidation of: Air Traffic Controllers</p>
<p>NOTE: The holder of Medical Class 1 shall be considered fit for any licence for its respective duration of validity unless otherwise specified.</p>		
<p>The medical examination and assessment shall be based upon the following requirements of physical and mental fitness. Note: The Director may in alternate years, for Class 1 applicants under 40 years of age, at his discretion, allow medical examiners to omit certain routine examination items related to the assessment of physical fitness, whilst increasing the emphasis on health education and prevention of ill health.</p>	<p>The medical examination and assessment shall be based on the following requirements of physical and mental fitness.</p>	<p>The medical examination and assessment shall be based on the following requirements of physical and mental fitness.</p>
<p>1.1 The applicant shall be free from (a) any abnormality, congenital or acquired; or (b) any active, latent, acute or chronic disability; (c) any wound, injury or sequelae from operation; or (d) any effect or side effect of any prescribed or non-prescribed therapeutic diagnostic or preventative medication taken such as would entail a degree of functional incapacity which accredited medical conclusion indicates would interfere with the safe operation of an aircraft or with the safe performance of duties during the period of validity of the licence applied.</p>	<p>2.1 The applicant shall be free from (a) any abnormality, congenital or acquired; (b) any active, latent, acute or chronic disability; (c) any wound, injury or sequelae 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 accredited medical conclusion indicates would interfere with the safe operation of an aircraft during the period of validity of the licence.</p>	<p>3.1 The applicant shall be free from (a) any abnormality, congenital or acquired; (b) any active, latent, acute or chronic disability; (c) any wound, injury or sequelae 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 accredited medical conclusion indicates would interfere with reliable performance of duties within the period of validity of the licence.</p>
<p>1.2 The applicant shall not suffer from</p>	<p>2.2 The applicant shall not suffer from</p>	<p>3.2 The applicant shall not suffer</p>

<i>Medical Class 1</i>	<i>Medical Class 2</i>	<i>Medical Class 3</i>
any disease or disability or any effect or side effect of any prescribed or non-prescribed therapeutic medication taken which may render the applicant liable to become unable to operate an aircraft safely or to perform assigned duties safely.	any disease or disability or any effect or side effect of any prescribed or non-prescribed therapeutic medication taken which may render the applicant liable to become unable to operate an aircraft safely or to perform assigned duties safely.	from any disease or disability which may render the applicant liable to a sudden or insidious degradation of performance within the period of validity of the licence.
<b><i>Nervous System</i></b>		
<p>1.3 The applicant shall have no established medical history or clinical diagnosis which, according to accredited medical conclusion, would render the applicant unable to exercise safely the privileges of the permit, licence or rating applied for or held, as follows:</p> <p>(a) An organic mental disorder;</p> <p>(b) A mental or behavioural disorder due to the use of psychoactive substance which includes dependence syndrome induced by alcohol or other psychoactive substances;</p> <p>(c) Schizophrenia or a schizotypal or delusional disorder;</p> <p>(d) A mood (affective) disorder;</p> <p>(e) a neurotic, stress-related or somatoform disorder;</p> <p>(f) a behavioural syndrome associated with physiological disturbances or physical factors;</p> <p>(g) a disorder of adult personality or behaviour, particularly if manifested by repeated overt acts;</p> <p>(h) mental retardation;</p> <p>(i) a disorder or psychological development;</p> <p>(j) a behavioural or emotional disorder, with onset in childhood or adolescence; or</p> <p>(k) a mental disorder not otherwise specified.</p>	<p>2.3 The applicant shall have no established medical history or clinical diagnosis which, according to accredited medical conclusion, would render the applicant unable to exercise safely the privileges of the permit, licence or rating applied for or held, as follows:</p> <p>(a) An organic mental disorder;</p> <p>(b) A mental or behavioural disorder due to the use of psychoactive substance which includes dependence syndrome induced by alcohol or other psychoactive substances;</p> <p>(c) Schizophrenia or a schizotypal or delusional disorder;</p> <p>(d) A mood (affective) disorder;</p> <p>(e) a neurotic, stress-related or somatoform disorder;</p> <p>(f) a behavioural syndrome associated with physiological disturbances or physical factors;</p> <p>(g) a disorder of adult personality or behaviour, particularly if manifested by repeated overt acts;</p> <p>(h) mental retardation;</p> <p>(i) a disorder or psychological development;</p> <p>(j) a behavioural or emotional disorder, with onset in childhood or adolescence; or</p> <p>(k) a mental disorder not otherwise specified.</p>	<p>3.3 The applicant shall have no established medical history or clinical diagnosis which, according to accredited medical conclusion, would render the applicant unable to exercise safely the privileges of the licence or rating applied for or held, as follows:</p> <p>(a) An organic mental disorder;</p> <p>(b) A mental or behavioural disorder due to the use of psychoactive substance which includes dependence syndrome induced by alcohol or other psychoactive substances;</p> <p>(c) Schizophrenia or a schizotypal or delusional disorder;</p> <p>(d) A mood (affective) disorder;</p> <p>(e) a neurotic, stress-related or somatoform disorder;</p> <p>(f) a behavioural syndrome associated with physiological disturbances or physical factors;</p> <p>(g) a disorder of adult personality or behaviour, particularly if manifested by repeated overt acts;</p> <p>(h) mental retardation;</p> <p>(i) a disorder or psychological development;</p> <p>(j) a behavioural or emotional disorder, with onset in childhood or adolescence; or</p> <p>(k) a mental disorder not otherwise specified.</p>
<p>1.3.1 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</p>	<p>2.3.1 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.</p>	<p>3.3.1 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</p>

<i>Medical Class 1</i>	<i>Medical Class 2</i>	<i>Medical Class 3</i>
licence and rating privileges.		applicant's licence and rating privileges.
<p>1.4 The applicant shall not suffer from any disease or disability which could render him likely to become suddenly unable either to operate an aircraft safely or to perform assigned duties safely. The applicant shall have no established medical history or clinical diagnosis of any of the following:</p> <p>(a) a progressive or non-progressive disease of the nervous system, the effects of which are likely to interfere with the safe operation of an aircraft;</p> <p>(b) a convulsive disorder such as epilepsy;</p> <p>(c) any disturbance of consciousness without satisfactory medical explanation of cause; or</p> <p>(d) any history of serious head injury the effects of which, are likely to interfere with the safe operation of an aircraft.</p>	<p>2.4 The applicant shall not suffer from any disease or disability which could render him likely to become suddenly unable either to operate an aircraft safely or to perform assigned duties safely. The applicant shall have no established medical history or clinical diagnosis of any of the following:</p> <p>(a) a progressive or non-progressive disease of the nervous system, the effects of which are likely to interfere with the safe operation of an aircraft;</p> <p>(b) a convulsive disorder such as epilepsy;</p> <p>(c) any disturbance of consciousness without satisfactory medical explanation of cause; or</p> <p>(d) any history of serious head injury the effects of which, are likely to interfere with the safe operation of an aircraft.</p>	<p>3.4 The applicant shall not suffer from any disease or disability which could render him likely to become suddenly unable either to operate an aircraft safely or to perform assigned duties safely. The applicant shall have no established medical history or clinical diagnosis of any of the following:</p> <p>(a) a progressive or non-progressive disease of the nervous system, the effects of which are likely to interfere with the safe operation of an aircraft;</p> <p>(b) a convulsive disorder such as epilepsy;</p> <p>(c) any disturbance of consciousness without satisfactory medical explanation of cause; or</p> <p>(d) any history of serious head injury the effects of which, are likely to interfere with the safe operation of an aircraft.</p>
<b><i>Cardio-vascular System</i></b>		
<p>1.5 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.</p>	<p>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.</p>	<p>3.5 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.</p>
<p>1.6.1 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.</p> <p>1.6.2 An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been</p>	<p>2.6.1 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.</p> <p>2.6.2 An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been</p>	<p>3.6 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.</p> <p>2.6.2 An applicant with an abnormal cardiac rhythm shall be assessed as</p>



<i>Medical Class 1</i>	<i>Medical Class 2</i>	<i>Medical Class 3</i>
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.	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.	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.
1.7 Routine electrocardiography shall (a) form part of the heart examination of an applicant for the first issue of a Medical Assessment; (b) be included in re-examinations of applicants between the ages 30 years and 50 years, no less frequently than every two years and (c) thereafter no less frequently than annually.	2.7 Routine electrocardiography shall form part of the heart examination of an applicant for the first issue of a Medical Certificate and at the first re-examination after the age 50 and subsequently no less frequently than every two years, and in re-examinations in all doubtful cases.	3.7 Routine electrocardiography shall form part of the heart examination of an applicant for the first issue of a Medical Certificate and at the first re-examination after the age 50 year and subsequently no less frequently than every two years, and in re-examinations in all doubtful cases.
1.8 The systolic and diastolic blood pressure shall be within normal limits. NOTE: (1) The use of drugs for control of high blood pressure is disqualifying except for those drugs, the use of which according to accredited medical conclusion, can be adequately tolerated by the applicant, are compatible with the safe performance of duties and can be closely monitored by the aviation medical examiner or a physician in communication with the Civil Aviation Medicine Division Medical Staff. (2) When initiating a new treatment for hypertension, the applicant shall not exercise the privileges of the licence until the new medication is well tolerated.	2.8 The systolic and diastolic blood pressure shall be within normal limits. NOTE: (1) The use of drugs for control of high blood pressure is disqualifying except for those drugs, the use of which according to accredited medical conclusion, can be adequately tolerated by the applicant, are compatible with the safe performance of duties and can be closely monitored by the aviation medical examiner or a physician in communication with the Civil Aviation Authority Medical Staff. 2) When initiating a new treatment for hypertension, the applicant shall not exercise the privileges of the licence until the new medication is well tolerated.	3.8 The systolic and diastolic blood pressure shall be within normal limits. NOTE: (1) The use of drugs for control of high blood pressure is disqualifying except for those drugs, the use of which, according to accredited medical conclusion, can be adequately tolerated by the applicant and are comparable with the safe performance of duties and can be closely monitored by the aviation medical examiner or a physician in communication with the Civil Aviation Authority Medical Staff (2) When initiating a new treatment for hypertension, the applicant shall not exercise the privileges of the licence until the new medication is well tolerated.
1.9 There shall be no functional or structural abnormality of the of the circulatory tree. The presence of varicosities does not necessarily entail unfitness.	2.9 There shall be no functional or structural abnormality of the of the circulatory tree. The presence of varicosities does not necessarily entail unfitness.	3. There shall be no functional or structural abnormality of the of the circulatory tree. The presence of varicosities does not necessarily entail unfitness.
<b><i>Respiratory System</i></b>		
1.10 There shall be no acute disability or progressive disease of the lungs, nor any active disease of the structures of the lungs, pleurae or mediastinum likely to result in incapacitating symptoms during normal and emergency operations .	2.10 There shall be no acute disability or progressive disease of the lungs, nor any active disease of the structures of the lungs, pleurae or mediastinum likely to result in incapacitating symptoms during normal and emergency operations . Chest	3.10 There shall be no significant disability or progressive disease of the lungs, pleura or mediastinum likely to result in incapacitating symptoms. <i>Note. - Chest radiography is usually not</i>

<b>Medical Class 1</b>	<b>Medical Class 2</b>	<b>Medical Class 3</b>
<p>Chest radiography shall form a part of the initial medical examination.</p> <p><i>Note.— Periodic chest radiography is usually not necessary but may be a necessity in situations where symptomatic pulmonary disease can be expected.</i></p>	<p>radiography shall form a part of the initial medical examination.</p> <p><i>Note.— Periodic chest radiography is usually not necessary but may be a necessity in situations where symptomatic pulmonary disease can be expected.</i></p>	<p><i>necessary but may be a necessity in situations where symptomatic pulmonary disease can be expected.</i></p>
<p>1.11 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.</p>	<p>2.11 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.</p>	<p>3.11 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.</p>
<p>1.12. Applicants with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit.</p> <p>1.12.1. 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..</p>	<p>2.12 Applicants with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit.</p> <p>2.12.1. 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.</p>	<p>3.12 Applicants with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit.</p> <p>3.12.1. 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</p>
<p>1.13 Cases of active pulmonary tuberculosis shall be assessed as unfit. Cases of quiescent or healed lesions which are known to be tuberculous, or are presumably tuberculous in origin, may be assessed as fit if not liable to cause incapacitation in the air.</p>	<p>2.13 Cases of active pulmonary tuberculosis, duly diagnosed, shall be assessed as unfit. Cases of quiescent or healed lesions which are known to be tuberculous, or are presumably tuberculous in origin, may be assessed as fit if not liable to cause incapacitation in the air.</p>	<p>3.13 Cases of active pulmonary tuberculosis, duly diagnosed, shall be assessed as unfit. Cases of quiescent or healed lesions which are known to be tuberculous, or are presumably tuberculous in origin, may be assessed as fit if the condition is not liable to affect the reliable performance of duties.</p>
<b>Gastro-intestinal System</b>		
<p>1.14 An applicant with significant impairment function of the gastrointestinal tract or its adnexa shall be assessed as unfit.</p>	<p>2.14 An applicant with significant impairment function of the gastrointestinal tract or its adnexa shall be assessed as unfit.</p>	<p>3.14 An applicant with significant impairment function of the gastrointestinal tract or its adnexa shall be assessed as unfit.</p>
<p>1.15 The applicant shall be completely free from any hernia that might give rise to incapacitating symptoms.</p>	<p>2.15 The applicant shall be completely free from any hernia that might give rise to incapacitating symptoms.</p>	

<b><i>Medical Class 1</i></b>	<b><i>Medical Class 2</i></b>	<b><i>Medical Class 3</i></b>
<p>1.16 Any sequelae of disease, medication or surgical intervention on any part of the digestive tract or its adnexa, likely to cause incapacitation in flight, in particular any obstructions due to stricture or compression shall be assessed as unfit.</p> <p><i>NOTE: An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexae, involving a total or partial excision or a diversion of any of these organs shall be assessed as unfit until such time as accredited medical conclusion considers that the effects of the operation are not liable to cause incapacitation.</i></p>	<p>2.16 Any sequelae of disease, medication or surgical intervention on any part of the digestive tract or its adnexa, likely to cause incapacitation in flight, in particular any obstructions due to stricture or compression shall be assessed as unfit.</p> <p><i>NOTE: An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexae, involving a total or partial excision or a diversion of any of these organs shall be assessed as unfit until such time as accredited medical conclusion considers that the effects of the operation are not liable to cause incapacitation.</i></p>	<p>3.16 Any sequelae of disease, medication or surgical intervention on any part of the digestive tract or its adnexa, liable to give rise to incapacitating or distracting symptoms, in particular any obstructions due to stricture or compression, shall be assessed as unfit.</p> <p><i>NOTE: An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexae, involving a total or partial excision or a diversion of any of these organs shall be assessed as unfit until such time as accredited medical conclusion considers that the effects of the operation are not liable to cause incapacitation</i></p>
<b><i>Other Medical Conditions</i></b>		
<p>1.17 Cases of metabolic, nutritional or endocrine disorders likely to interfere with the safe operation of an aircraft shall be assessed as unfit.</p>	<p>2.17 Cases of metabolic, nutritional and endocrine disorders likely to interfere with the safe operation of an aircraft shall be assessed as unfit.</p>	<p>3.17 Cases of metabolic, nutritional or endocrine disorders likely to interfere with reliable performance of duties shall be assessed as unfit.</p>
<p>1.18 Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.</p> <p>1.18.1. 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.</p>	<p>2.18 Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.</p> <p>2.18.1. 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.</p>	<p>3.18 Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.</p> <p>3.18.1. 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.\</p>
<p>1.19 Not allocated</p>	<p>2.19 Not allocated</p>	<p>3.19 Not allocated</p>
<p>1.20.1 Applicants with diseases of the blood and/or the lymphatic system shall be assessed as unfit unless adequately investigated and their condition found</p>	<p>2.20.1 1 Applicants with diseases of the blood and/or the lymphatic system shall be assessed as unfit unless adequately investigated and their condition found</p>	<p>3.20.1 Applicants with diseases of the blood and/or the lymphatic system shall be assessed as unfit unless adequately investigated and their</p>

<b>Medical Class 1</b>	<b>Medical Class 2</b>	<b>Medical Class 3</b>
<p>unlikely to interfere with the safe exercise of their licence and rating privileges.  <i>Note.— Sickle cell trait and other haemoglobinopathic traits are usually compatible with fit assessment.</i>            1.20.2 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.            1.20.3 Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.</p>	<p>unlikely to interfere with the safe exercise of their licence and rating privileges.  <i>Note.— Sickle cell trait and other haemoglobinopathic traits are usually compatible with fit assessment.</i>            2.20.2 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.            2.20.3 Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.</p>	<p>condition found unlikely to interfere with the safe exercise of their licence and rating privileges.  <i>Note.— Sickle cell trait and other haemoglobinopathic traits are usually compatible with fit assessment.</i>            3.20.2 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.            3.20.3 Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated..</p>
<b>Genito-urinary System</b>		
<p>1.21 Applicants with acquired immunodeficiency syndrome (AIDS) shall be assessed as unfit.            1.21.1 Applicants who are seropositive for human immunodeficiency virus (HIV) shall be assessed as unfit unless full investigation provides no evidence of clinical disease.</p>	<p>2.21 Applicants with acquired immunodeficiency syndrome (AIDS) shall be assessed as unfit.            2.21.1 Applicants who are seropositive for human immunodeficiency virus (HIV) shall be assessed as unfit unless full investigation provides no evidence of clinical disease.</p>	<p>3. Applicants with acquired immunodeficiency syndrome (AIDS) shall be assessed as unfit.            3.21.1 Applicants who are seropositive for human immunodeficiency virus (HIV) shall be assessed as unfit unless full investigation provides no evidence of clinical disease.</p>
<p>1.22 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.            1.22.1 An Applicant who has undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.</p>	<p>2.22 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.            2.22.1 An Applicant who has undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.</p>	<p>3.22 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.            3.22.1 An Applicant who has undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.</p>
<b>Reproductive System</b>		
1.23 An applicant with gynecological	1.23 An applicant with gynecological	1.23 An applicant with gynecological

<b><i>Medical Class 1</i></b>	<b><i>Medical Class 2</i></b>	<b><i>Medical Class 3</i></b>
disorders that are likely to interfere with the safe exercise of his licence and rating privileges shall be assessed as unfit	disorders that are likely to interfere with the safe exercise of his licence and rating privileges shall be assessed as unfit	disorders that are likely to interfere with the safe exercise of his licence and rating privileges shall be assessed as unfit
<p>1.24.1 An applicant who is pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low risk uncomplicated pregnancy.</p> <p>1.24.2 An applicant with low-risk uncomplicated pregnancy determined by an obstetrical evaluation and continued medical supervision, the fit assessment shall be limited to the period from the end of the 12th week until the end of the 26th week of gestation.</p> <p>1.24.3 Following confinement or termination of the pregnancy, an 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.</p>	<p>2.24.1 An applicant who is pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low risk uncomplicated pregnancy.</p> <p>2.24.2 An applicant with low-risk uncomplicated pregnancy determined by an obstetrical evaluation and continued medical supervision, the fit assessment shall be limited to the period from the end of the 12th week until the end of the 26th week of gestation.</p> <p>2.24.3 Following confinement or termination of the pregnancy, an 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 safely exercise the privileges of her licence and ratings.</p>	<p>3.24.1 An applicant who is pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.</p> <p>3.24.2 An applicant with a low-risk uncomplicated pregnancy determined by an obstetrical evaluation and continued medical supervision, the fit assessment shall be limited to the period from the end of the 34th week.</p> <p>3.24.3 During the gestational period, precaution should be taken for the timely relief of an air traffic controller in the event or early onset of labour or other complications.</p> <p>3.24.4 Following confinement or termination of pregnancy, an applicant shall not be permitted to exercise the privileges of her licence until she has undergone reevaluation 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.</p>
<b>Musculoskeletal System</b>		
<p>1.25 An 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.</p> <p><i>Note.— Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.</i></p>	<p>2.25 An 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.</p> <p><i>Note.— Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.</i></p>	<p>3.25 An 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.</p> <p><i>Note.— Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.</i></p>
<b>Ear, Nose and Throat Conditions</b>		

<i>Medical Class 1</i>	<i>Medical Class 2</i>	<i>Medical Class 3</i>
<p>1.26 An 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.</p> <p>1.26.1 There shall be:</p> <p>a) no disturbance of vestibular function;</p> <p>b) no significant dysfunction of the Eustachian tubes; and</p> <p>c) no unhealed perforation of the tympanic membranes.</p> <p>1.26.2 A single dry perforation of the tympanic membrane need not render the applicant unfit.</p>	<p>2.26 An 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.</p> <p>2.26.1 There shall be:</p> <p>a) no disturbance of vestibular function;</p> <p>b) no significant dysfunction of the Eustachian tubes; and</p> <p>c) no unhealed perforation of the tympanic membranes.</p> <p>2.26.2 A single dry perforation of the tympanic membrane need not render the applicant unfit.</p>	<p>3.26 An 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.</p> <p>2.26.1 There shall be:</p> <p>a) no disturbance of vestibular function;</p> <p>b) no significant dysfunction of the Eustachian tubes; and</p> <p>c) no unhealed perforation of the tympanic membranes.</p> <p>2.26.2 A single dry perforation of the tympanic membrane need not render the applicant unfit.</p>
<p>1.27 There shall be:</p> <p>a) no nasal obstruction; and</p> <p>b) no malformation nor any disease of the buccal cavity or upper respiratory tract</p> <p>which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.</p>	<p>2.27 There shall be:</p> <p>a) no nasal obstruction; and</p> <p>b) no malformation nor any disease of the buccal cavity or upper respiratory tract</p> <p>which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.</p>	<p>3.27 There shall be no alformation 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.</p>
<p>1.28 Cases of speech defects and stuttering that cause communication difficulties shall be considered unfit.</p>	<p>2.28 Cases of speech defects and stuttering that cause communication difficulties shall be considered unfit.</p>	<p>3.28 Cases of speech defects and stuttering that cause communication difficulties shall be considered unfit.</p>
<p><b>Hearing Requirement</b></p>		
<p>1.29 The applicant shall be required to be free from any hearing defect which could interfere with the safe performance of the applicant's duties in exercising the privileges of the licence.</p>	<p>2.29 The applicant shall be free from any hearing defect which could interfere with the safe performance of the applicants duties in exercising the privileges of the licence.</p>	<p>3.29 The applicant shall be required to be free from any hearing defect which could interfere with the safe performance of the applicants duties in exercising the privileges of the licence</p>
<p>1.30 The applicant shall be tested on a pure tone audiometer at the initial examination for a Medical Class I, not less than once every five years up to age of 40 years, and thereafter not less than once every two years, and shall not show a hearing loss, in either ear separately, of more than 35 dB at any of the</p>	<p>2.30 An applicant shall be tested by pure-tone audiometry at first issue of the assessment; and not less than once every two years above the age of 50 years and shall not have a hearing loss, in either ear separately, of more than 35dB at any of the frequencies, 500Hz, 1000Hz or 2000Hz, or more than 50</p>	<p>3.30 The applicant shall be tested on a pure tone audiometer at the initial examination for a Medical Class I, not less than once every five years up to age of 40 years, and thereafter not less than once every three years, and shall not show a hearing loss, in either ear separately, of more than 35 dB at</p>

<b><i>Medical Class 1</i></b>	<b><i>Medical Class 2</i></b>	<b><i>Medical Class 3</i></b>
<p>frequencies 500, 1000, 2000 Hz or more than 50 dB at 3000 Hz. However, an applicant with a hearing loss greater than the above may be declared fit provided that:</p> <p>(a) the applicant has a hearing performance in each ear separately equivalent to that of a normal person, against a background noise that will simulate the masking properties of flight deck noise upon speech and beacon signals; and</p> <p>(b) the applicant has the ability to hear an average conversational voice in a quiet room, using both ears, at a distance of 2 meters from the examiner, with the back turned to the examiner.</p>	<p>dB at 3000Hz. an applicant with a hearing loss greater than that specified may be declared fit provided that</p> <p>(a) 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; and</p> <p>(b) the applicant has the ability to hear an average conversational voice in a quiet room, using both ears, at a distance of 2 meters from the examiner, with the back turned to the examiner.</p>	<p>any of the frequencies 500, 1000, 2000 Hz or more than 50 dB at 3000 Hz. However, an applicant with a hearing loss greater than the above may be declared fit provided that:</p> <p>(a) the applicant has a hearing performance in each ear separately equivalent to that of a normal person, against a background noise that will simulate the masking properties of flight deck noise upon speech and beacon signals; and</p> <p>(b) the applicant has the ability to hear an average conversational voice in a quiet room, using both ears, at a distance of 2 meters from the examiner, with the back turned to the examiner.</p>
<p>1.31 At each examination the applicant shall demonstrate, in a quiet room, the ability to hear a soft-whispered voice in each ear separately at a distance of two metres (six feet) from the Civil Aviation Medical Examiner. Applicants experiencing some difficulty with routine whisper shall be tested by pure tone audiometry.</p>	<p>2.31 At each examination the applicant shall demonstrate, in a quiet room, the ability to hear a soft-whispered voice in each ear at a distance of two metres (six feet) from the Civil Aviation Medical Examiner and an average conversational voice with both ears at three metres (nine feet) with the back turned to the Aviation Medical Examiner. Applicants experiencing difficulty with routine whisper or conversational voice tests shall be tested by pure tone audiometry.</p>	<p>3.31 At each examination the applicant shall demonstrate, in a quiet room the ability to hear a soft-whispered voice in each ear at a distance of two metres (six feet) from the Civil Aviation Medical Examiner. Applicants experiencing some difficulty with routine whisper shall be tested by pure tone audiometry.</p>
<p>1.32 Alternatively, other methods providing equivalent results to those specified in 1.30 shall be used.</p>	<p>2.32 Alternatively, other methods providing equivalent results to those specified in 2.30 shall be used.</p>	<p>3.32 Alternatively, other methods providing equivalent results to those specified in 3.30 shall be used.</p>
<p><b>Visual Requirement</b></p>		
<p>1.33 The function of the eyes and their adnexae shall be normal. There shall be no active pathological or artificially induced condition, acute or chronic, of either eye or adnexae which is likely to interfere with its proper function to an extent that would jeopardize safety in flight or the safe performance of duties.</p>	<p>2.33 The function of the eyes and their adnexae shall be normal. There shall be no active pathological or artificially induced condition, acute or chronic, of either eye or adnexae which is likely to interfere with its proper function to an extent that would jeopardize safety in flight, or safe performance of duties.</p>	<p>3.33 There shall be no active pathological or artificially induced condition, acute or chronic, of either eye or adnexae which is likely to interfere with its proper function to an extent that would jeopardize safety in the safe performance of duties.</p>
<p>1.34 The applicant shall be required to have normal fields of vision.</p>	<p>2.34 The applicant shall be required to have normal fields of vision.</p>	<p>3.34 The applicant shall be required to have normal fields of vision.</p>

<i>Medical Class 1</i>	<i>Medical Class 2</i>	<i>Medical Class 3</i>
<p>1.35.1 The applicant shall be required to have a distant visual acuity of not less than 6/9 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 shall be assessed as fit provided that:</p> <p>(a) such correcting lenses are worn when exercising the privileges of the licence or rating applied for or held;</p> <p>(b) the applicant has a spare pair of suitable correcting glasses available for immediate use when exercising the privileges of the licence.</p> <p>NOTE: (1) "Correcting lenses" shall be interpreted to mean spectacles or contact lenses. Contact lenses shall not be approved prior to six months trial wear.</p> <p>NOTE : (2) An applicant accepted as meeting the provisions of paragraph 1.35.1(c) is deemed to continue to do so unless there is reason to suspect otherwise, in which case refraction is repeated as required. The uncorrected visual acuity is measured and recorded at each re-examination. Conditions which indicate a need to re-determine the refractive error include, but are not limited by: a refractive state close to the limit of acceptability, a substantial decrease in the uncorrected visual acuity and the occurrence of eye disease, eye injury or eye surgery.</p> <p>1.35.2 Applicant whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be provide a full ophthalmic report prior to the initial Medical Assessment and every five years after;</p> <p>1.35.3 Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses</p> <p>NOTE: 1 If spectacles are used, high-index lenses are needed to minimize peripheral field distortion.</p>	<p>2.35.1 The applicant shall be required to have a distant visual acuity of not less than 6/12 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 shall be assessed as fit provided that:</p> <p>(a) such correcting lenses are worn when exercising the privileges of the licence or rating applied for or held;</p> <p>(b) the applicant has a spare pair of suitable correcting glasses available for immediate use when exercising the privileges of the licence.</p> <p>NOTE: (1) "Correcting lenses" shall be interpreted to mean spectacles or contact lenses. Contact lenses shall not be approved prior to six months trial wear.</p> <p>NOTE : (2) An applicant accepted as meeting the provisions of paragraph 2.35.1(c) is deemed to continue to do so unless there is reason to suspect otherwise, in which case refraction is repeated as required. The uncorrected visual acuity is measured and recorded at each re-examination. Conditions which indicate a need to re-determine the refractive error include, but are not limited by: a refractive state close to the limit of acceptability, a substantial decrease in the uncorrected visual acuity and the occurrence of eye disease, eye injury or eye surgery.</p> <p>2.35.2 Applicant whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be provide a full ophthalmic report prior to the initial Medical Assessment and every five years after;</p> <p>2.35.3 Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses</p> <p>NOTE: 1 If spectacles are used, high-index lenses are needed to minimize peripheral field distortion.</p>	<p>3.35 The applicant shall be required to have a distant visual acuity of not less than 6/9 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 shall be assessed as fit provided that:</p> <p>(a) such correcting lenses are worn when exercising the privileges of the licence or rating applied for or held;</p> <p>(b) the applicant has a spare pair of suitable correcting glasses available for immediate use when exercising the privileges of the licence.</p> <p>NOTE: (1) "Correcting lenses" shall be interpreted to mean spectacles or contact lenses. Contact lenses shall not be approved prior to six months trial wear.</p> <p>NOTE : (2) An applicant accepted as meeting the provisions of paragraph 3.35.1(c) is deemed to continue to do so unless there is reason to suspect otherwise, in which case refraction is repeated as required. The uncorrected visual acuity is measured and recorded at each re-examination. Conditions which indicate a need to re-determine the refractive error include, but are not limited by: a refractive state close to the limit of acceptability, a substantial decrease in the uncorrected visual acuity and the occurrence of eye disease, eye injury or eye surgery.</p> <p>3.35.2 Applicant whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be provide a full ophthalmic report prior to the initial Medical Assessment and every five years after;</p> <p>3.35.3 Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses</p> <p>NOTE: 1 If spectacles are used, high-index lenses are needed to minimize peripheral field distortion.</p>



<i>Medical Class 1</i>	<i>Medical Class 2</i>	<i>Medical Class 3</i>
<p>1.36.1 The applicant shall be required to have the ability to read the N5 Chart or its equivalent at a distance of 30 to 50 centimetres (12 to 20 inches) and the ability to read the N14 chart or its equivalent at a distance of 100 cm (40 inches). If the requirement is met only by the use of correcting lenses, the applicant shall be assessed as fit provided this near correction is added to the spectacles correction already prescribed in accordance with 1.35; if no such correction is prescribed a pair of near correcting lenses are available for immediate use when exercising 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.</p> <p>NOTE: (1) N5 and N14 refer to the Faculty of Ophthalmologist's Reading Type.</p> <p>NOTE: (2) An applicant who needs correction to meet this requirement will require "look-over", bifocal or trifocal lenses to enable him to read the instruments and a chart or manual held in the hand, and also make use of distant vision through the windscreen without removing his lenses. Single-vision near correction (full lenses of one power only, appropriate to reading) significantly reduces distant visual acuity and is therefore not acceptable</p> <p>NOTE: (3). Whenever there is a requirement to obtain or renew correcting lenses, an applicant shall advise the refractionist of reading distances for the visual flight deck tasks relevant to the type of aircraft in which he is likely to function or to other aviation tasks.</p> <p>136.2 When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.</p>	<p>2.36.1 The applicant shall be required to have the ability to read the N5 Chart or its equivalent at a distance of 30 to 50 centimetres (12 to 20 inches). If this requirement is met only by the use of correcting lenses, the applicant shall be assessed as fit provided this near correction is added to the spectacles correction already prescribed in accordance with 1.35; if no such correction is prescribed a pair of near correcting lenses are available for immediate use when exercising 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.</p> <p>NOTE: (1) N5 refers to the Faculty of Ophthalmologist's Reading Type.</p> <p>NOTE: (2) An applicant who needs correction to meet this requirement will require "look-over", bifocal or trifocal lenses to enable him to read the instruments and a chart or manual held in the hand, and also make use of distant vision through the windscreen without removing his lenses. Single-vision near correction (full lenses of one power only, appropriate to reading) significantly reduces distant visual acuity and is therefore not acceptable</p> <p>NOTE: (3). Whenever there is a requirement to obtain or renew correcting lenses, an applicant shall advise the refractionist of reading distances for the visual flight deck tasks relevant to the type of aircraft in which he is likely to function or to other aviation tasks.</p> <p>2.36.2 When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.</p>	<p>3.36.1 The applicant shall be required to have the ability to read the N5 Chart or its equivalent at a distance of 30 to 50 centimetres (12 to 20 inches) and the ability to read the N14 chart or its equivalent at a distance of 100 cm (40 inches). If the requirement is met only by the use of correcting lenses, the applicant shall be assessed as fit provided this near correction is added to the spectacles correction already prescribed in accordance with 1.35; if no such correction is prescribed a pair of near correcting lenses are available for immediate use when exercising 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.</p> <p>NOTE: (1) N5 and N14 refer to the Faculty of Ophthalmologist's Reading Type.</p> <p>NOTE: (2) An applicant who needs correction to meet this requirement will require "look-over", bifocal or trifocal lenses to enable him to read the instruments and a chart or manual held in the hand, and also make use of distant vision through the windscreen without removing his lenses. Single-vision near correction (full lenses of one power only, appropriate to reading) significantly reduces distant visual acuity and is therefore not acceptable</p> <p>NOTE: (3) Whenever there is a requirement to obtain or renew correcting lenses, an applicant shall advise the refractionist of the reading distances for the visual Air Traffic Control tasks relevant to the normal work environment.</p> <p>3.36.2 When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.</p>
<p>1.37 (a)Contact lenses shall be monofocal and non-tinted; (b) The lenses must be well tolerated by</p>	<p>2.37 (a)Contact lenses shall be monofocal and non-tinted; (b) The lenses must be well tolerated by</p>	<p>3.37 37 (a)Contact lenses shall be monofocal and non-tinted; (b) The lenses must be well tolerated</p>

<i>Medical Class 1</i>	<i>Medical Class 2</i>	<i>Medical Class 3</i>
<p>the applicant; and (c)All contact lens wearers shall have replacement spectacles available for immediate use in the event the contact lens(es) become dislodged or are required to be removed in flight; Hard contact lens wearers shall be required to have two pairs of spectacles available to overcome the frequent phenomenon of spectacle blur. In such cases, one pair of spectacles shall correct the vision immediately following removal of the lens(es), the second pair shall correct the vision after the eye is stabilized. NOTE: (1) When an applicant is licensed with the limitation "Valid only when wearing required contact lenses" further evaluation shall be required should the applicant, in the future, wish to wear spectacles only on a continuing basis while flying. NOTE: (2) Prescription sun lenses shall not be deemed to meet these requirements for flight at night.</p>	<p>the applicant; and (c)All contact lens wearers shall have replacement spectacles available for immediate use in the event the contact lens(es) become dislodged or are required to be removed in flight; Hard contact lens wearers shall be required to have two pairs of spectacles available to overcome the frequent phenomenon of spectacle blur. In such cases, one pair of spectacles shall correct the vision immediately following removal of the lens(es), the second pair shall correct the vision after the eye is stabilized. NOTE: (1) When an applicant is licensed with the limitation "Valid only when wearing required contact lenses" further evaluation shall be required should the applicant, in the future, wish to wear spectacles only on a continuing basis while flying. (2) Prescription sun lenses shall not be deemed to meet these requirements for flight at night.</p>	<p>by the applicant; and (c)All contact lens wearers shall have replacement spectacles available for immediate use in the event the contact lens(es) become dislodged or are required to be removed in flight; Hard contact lens wearers shall be required to have two pairs of spectacles available to overcome the frequent phenomenon of spectacle blur. In such cases, one pair of spectacles shall correct the vision immediately following removal of the lens(es), the second pair shall correct the vision after the eye is stabilized NOTE: (1) When an applicant is licensed with the limitation "Valid only when wearing required contact lenses" further evaluation shall be required should the applicant, in the future, wish to wear spectacles only on a continuing basis while exercising the privileges of the applicant's licence. (2) Prescription sun lenses shall not be deemed to meet these requirements for night duties.</p>
<b>Ocular Muscle Balance</b>		
<p>1.38 The applicant shall be assessed with the Cover-Uncover Test, or an appropriate technique to measure the amount of exophoria, esophoria and hyperphoria present in prism diopters. The acceptable limits shall be 6 diopters for exophoria and esophoria, and 1 diopter for hyperphoria. NOTE: Applicants found to have ocular muscle imbalance greater than the above noted shall be referred to an eye specialist for evaluation. Such cases shall be licensed under the standards provided that there is no danger of developing diplopia during the course of a prolonged or difficult flight.</p>	<p>2.38 The applicant shall be assessed with the Cover-Uncover Test, or an appropriate technique to measure the amount of exophoria, esophoria and hyperphoria present in prism diopters. The acceptable limits shall be 6 diopters for exophoria and esophoria, and 1 diopter for hyperphoria. NOTE: Applicants found to have ocular muscle imbalance greater than the above noted shall be referred to an eye specialist for evaluation. Such cases shall be assessed fit if this assessment is valid according to accredited medical conclusion.</p>	<p>3.38 The applicant shall be assessed with the Cover-Uncover Test, or an appropriate technique to measure the amount of exophoria, esophoria and hyperphoria present in prism diopters. The acceptable limits shall be 6 diopters for exophoria and esophoria, and 1 diopter for hyperphoria. NOTE: Applicants found to have ocular muscle imbalance greater than the above noted shall be referred to an eye specialist for evaluation. Such cases shall be assessed fit if this assessment is valid according to accredited medical conclusion.</p>
<b>Colour Perception Requirement</b>		
<p>1.39 The candidate shall be required to demonstrate his ability to perceive</p>	<p>2.39 The candidate shall be required to demonstrate his ability to perceive readily</p>	<p>3.39 The candidate shall be required to demonstrate his ability to perceive</p>

<i>Medical Class 1</i>	<i>Medical Class 2</i>	<i>Medical Class 3</i>
readily those colours the perception of which is necessary for the safe performance of his duties.	those colours the perception of which is necessary for the safe performance of his duties.	readily those colours the perception of which is necessary for the safe performance of his duties
1.40 If an applicant does not qualify under paragraph. 1.39, the applicants colour vision shall be assessed fit under this requirement if he passes a Civil Aeronautics colour perception lantern test or a Farnsworth D-15 test.	2.40 If an applicant does not qualify under paragraph 2.39, the applicants colour vision shall be assessed fit under this requirement if he passes a Civil Aeronautics colour perception lantern test or a Farnsworth D-15 test.	3.40 If an applicant does not qualify under para. 3.39, the applicants colour vision shall be assessed fit under this requirement if he passes a Farnsworth D-15 test.
1.41 An applicant who does not qualify under paragraphs. 1.39 or 1.40 shall be assessed as fit for a restricted Commercial Pilot Licence provided the licence is issued with the following restriction: "Valid daylight only, 2-way radio required at controlled airports".	2.41 Applicants who do not meet the Requirements of paras. 2.39 and 2.40 may be considered fit with the following restriction: "Valid daylight only, 2-way radio required at controlled airports". NOTE: The colour perception practical test is no longer acceptable.	3.41 Not allocated.

**Standard NO:1.18 AIRCRAFT MAINTENANCE ENGINEER LICENCE REQUIREMENTS**

**Standard NO.1.18.1**

**Regulation 170(2),177(1)(e),180(2)**

***Knowledge Requirements for an Aircraft Maintenance Engineer Licence***

The following are the knowledge areas requirements for an Aircraft Maintenance Engineer Licence:

*(a) air law and airworthiness requirements*

Rules and regulations relevant to an aircraft maintenance licence holder including applicable airworthiness requirements governing certification and continuing airworthiness of aircraft and approved aircraft maintenance organization and procedures;

*(b) natural science and aircraft general knowledge*

Basic mathematics; units of measurement; fundamental principles and theory of physics and chemistry applicable to aircraft maintenance;

*(c) aircraft engineering*

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;

*(d) aircraft maintenance*

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

*(e) human performance and limitations*

Human performance and limitations relevant to the duties of an aircraft maintenance licence holder.

**Standard NO.1.18.2**

**Regulation 172**

***Skill Requirements For the Aircraft Maintenance Engineer Licence***

(a) Each applicant for a Aviation Maintenance Engineer (AME) license or rating shall pass a skill test containing both oral questioning and practical application of skill appropriate to the rating(s) sought. The tests cover the applicants skill in performing the practical projects on the

subjects covered by the written test for that rating. The applicant will be provided with appropriate facilities, tools, materials and airworthiness data.

(b) **AME – General.** The skill test for the AME License shall test the applicant's knowledge and performance in at least the following areas of operation:

- (1) Basic electricity.
- (2) Aircraft drawings.
- (3) Weight and balance.
- (4) Fluid line and fittings
- (5) Materials and processes.
- (6) Ground operation and servicing.
- (7) Cleaning and corrosion control
- (8) Mathematics.
- (9) Maintenance forms and records.
- (10) Basic physics.
- (11) Maintenance publications.
- (12) Aircraft mechanic technician privileges and limitations.

(c) **AME Airframe Rating.** The skill test for the airframe rating shall test the applicant's knowledge and performance in at least the following areas of operation:

- (1) Wood structures.
- (2) Aircraft covering.
- (3) Aircraft finishes.
- (4) Sheet metal and non-metallic structures.
- (5) Welding.
- (6) Assembly and rigging.
- (7) Airframe inspection.
- (8) Fuel systems.
- (9) Aircraft landing gear systems.
- (10) Hydraulic and pneumatic power systems.
- (11) Cabin atmosphere control systems.
- (12) Aircraft instrument systems.
- (13) Communication and navigation systems.
- (14) Aircraft fuel systems.
- (15) Aircraft electrical systems.

- (16) Position and warning systems.
- (17) Ice and rain control systems.
- (18) Fire protection systems.

(d) **AME Powerplant Rating.** The skill test for the powerplant rating shall test the applicant's knowledge and performance in at least the following areas of operation:

- (1) Reciprocating systems.
- (2) Turbine engines.
- (3) Engine inspection.
- (4) Engine instrument systems.
- (5) Engine fire protection systems.
- (6) Engine electrical systems.
- (7) Lubrication systems.
- (8) Ignition and starting systems.
- (9) Fuel metering.
- (10) Engine fuel systems.
- (11) Induction and engine airflow systems.
- (12) Engine cooling systems.
- (13) Engine exhaust and reverser systems.
- (14) Propellers.
- (15) Auxiliary power units.

(e) **AME Avionics Rating.** The skill test for the avionics rating shall test the applicant's knowledge and performance in the basic workshop and maintenance practices in at least the following areas of operation:

- (1) Avionics – electrical.
- (2) Avionics – instrument.
- (3) Avionics – autoflight.
- (4) Avionics – radio.
- (5) Repair, maintenance and function testing of aircraft systems/components – avionics.
- (6) Job/task documentation and control practices.

## **Standard NO:1.19 LANGUAGE PROFICIENCY**

### Regulation 201A

#### 1 General

(a) An applicant for any licence must meet the language proficiency requirements contained in this standard. An applicant for a licence or a licence holder shall demonstrate, in a manner acceptable to the Director, compliance with the holistic descriptors in paragraph 2 below and with the Operational Level (Level 4) of the Language Proficiency Rating Scale as mentioned in paragraph 3 below.

#### 2 Holistic descriptors: Proficient speakers shall:

- (i) Communicate effectively in voice-only (telephone/radiotelephone) and in face-to-face situations;
- (ii) Communicate on common, concrete and work-related topics with accuracy and clarity;
- (iii) 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;
- (iv) 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
- (v) Use a dialect or accent which is intelligible to the aeronautical community.

#### 3 Rating scale:

##### (a) Pre-elementary Level (Level 1):

- (i) Pronunciation: Performs at a level below the Elementary Level.
- (ii) Structure: Performs at a level below the Elementary Level.
- (iii) Vocabulary: Performs at a level below the Elementary Level.
- (iv) Fluency: Performs at a level below the Elementary Level.
- (v) Comprehension: Performs at a level below the Elementary Level.
- (vi) Interactions: Performs at a level below the Elementary Level.

##### (b) Elementary Level (Level 2):

- (i) Pronunciation: Pronunciation, stress, rhythm, and intonation are heavily influenced by the first language or regional variation and usually interfere with ease of understanding.
- (ii) Structure: Shows only limited control of a few simple memorized grammatical structures and sentence patterns.
- (iii) Vocabulary: Limited vocabulary range consisting only of isolated words and memorized phrases.

- (iv) Fluency: 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.
- (v) Comprehension: Comprehension is limited to isolated, memorized phrases when they are carefully and slowly articulated.
- (vi) Interactions: Response time is slow and often inappropriate. Interaction is limited to simple routine exchanges.

(c) Pre-operational Level (Level 3):

- (i) Pronunciation: Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation and frequently interfere with ease of understanding.
- (ii) Structure: Basic grammatical structures and sentence patterns associated with predictable situations are not always well controlled. Errors frequently interfere with meaning.
- (iii) Vocabulary: 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. Is often unable to paraphrase successfully when lacking vocabulary.
- (iv) Fluency: 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.
- (v) Comprehension: 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.
- (vi) Interaction: 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.

(d) Operational Level (Level 4):

- (i) Pronunciation: Pronunciation, stress, rhythm and intonation are influenced by the first language or regional variation but only sometimes interfere with understanding.
- (ii) Structure: 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.
- (iii) Vocabulary: 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.



- (iv) Fluency: 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.
- (v) Comprehension: 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.
- (vi) Interactions: 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.

(e) Extended Level (Level 5):

- (i) Pronunciation: Pronunciation, stress, rhythm, and intonation, though influenced by the first language or regional variation, rarely interfere with ease of understanding.
- (ii) Structure: Basic grammatical structures and sentence patterns are consistently well controlled. Complex structures are attempted but with errors which sometimes interfere with meaning.
- (iii) Vocabulary: Vocabulary range and accuracy are sufficient to communicate effectively on common, concrete, and work related topics. Paraphrases consistently and successfully. Vocabulary is sometimes idiomatic.
- (iv) Fluency: 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.
- (v) Comprehension: 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.
- (vi) Interactions: Responses are immediate, appropriate, and informative. Manages the speaker/listener relationship effectively.

(f) Expert Level (Level 6):

- (i) Pronunciation: Pronunciation, stress, rhythm, and intonation, though possibly influenced by the first language or regional variation, almost never interfere with ease of understanding.
- (ii) Structure: Both basic and complex grammatical structures and sentence patterns are consistently well controlled.

- (iii) Vocabulary: 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.
- (iv) Fluency: 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.
- (v) Comprehension: Comprehension is consistently accurate in nearly all contexts and includes comprehension of linguistic and cultural subtleties.
- (vi) Interactions: Interacts with ease in nearly all situations. Is sensitive to verbal and non-verbal cues, and responds to them appropriately.

**Standard NO. 1.20 - APPROVED TRAINING ORGANIZATION**

**Regulation 201B**

**Standard NO. 1.20.1 Approved Training Organization**

**Regulation 201B(1)**

***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 Standard.

1.2 The approval document issued by the Director 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 An applicant for an approved training organization shall provide the Director with 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 the Director has authorized the approved training organization to conduct the testing required for the issuance of 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 The Director may approve a training programme for a private pilot licence, commercial pilot licence or instrument rating that allows an alternative means of compliance with the experience requirements established by Annex 1, provided that the approved training organization demonstrates to the satisfaction of the Director 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.

3.2 When the Director approves a training programme for a multi-crew pilot licence, the approved training organization shall demonstrate to the satisfaction of the Director 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.

### **4. Safety management**

4.1 An approved training organization that is exposed to safety risks during the provision of its services shall implement a safety management system acceptable to the Director 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 The 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.

### **5. Quality assurance system**

A training organization shall establish a quality assurance system, acceptable to the Director 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 Director.

6.2 A 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 Director and their use shall be approved by the Director to ensure that they are appropriate to the task.

### ***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 Director.

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.

### ***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 Director.

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***

The Director shall maintain an effective oversight programme of approved training organization to ensure continuing compliance with the approval requirements.

### ***10. Evaluation and checking***

When the Director 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 Director or designated by the training organization in accordance with criteria approved by the Director.

## **1.20.2. Framework For Safety Management Systems (SMS)**

### **Regulation 201B(1).**

This Standard 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 Standard also includes a brief description of each element of the framework.

## ***1. Safety policy and objectives***

### **1.1 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 that provides for the orderly and efficient 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.