

### Sint Maarten Civil Aviation Authority

Ministry of Tourism, Economic Affairs, Traffic and Telecommunication

Bijlage 2

## SINT MAARTEN CIVIL AVIATION REGULATIONS

PART 2 — PERSONNEL LICENSING

2024

### AMENDMENT

Location	Date	Description
Introduction	10/2024	Introduction included
Table of Contents	10/2024	Updated titles for 2.3.1.3; 2.3.10.1; 2.3.11.10; 2.3.11.13; 2.4.3; 2.6.2.4; 2.6.2.9; IS 2.2.4.9; IS 2.2.4.10; IS 2.2.8A; IS 2.2.8B
2.1.1.1(a)	10/2024	Minor edit
2.1.1.3(a)	10/2024	Added abbreviation for C2 Link and revised the abbreviation for RPAS to remotely piloted aircraft system
2.1.1.1(a)(1)	10/2024	Editorial change: endorsements and designations added
2.1.1.1(a)(2)	10/2024	Editorial change: endorsements, certificates and designations added
2.1.1.1(a)(3)	10/2024	Editorial change: designations added
2.1.1.3(a)	10/2024	Minor edit
2.1.1.3(a)(2)	10/2024	Added abbreviation for Aerodrome Flight Information Office Service officer, AFISO
2.1.1.3(a)	10/2024	Added abbreviations for ATC, OJTI, and OM from ICAO Annex 1, Amendment 176
2.1.1.3 (a)	10/2024	Removed abbreviation: DFEE, DFNE, DFOOE, DME, DPRE, PR, RP, RPA,
2.2	10/2024	Minor edit: Renumbered previous 2.4.3
2.2.1	10/2024	Editorial change: Endorsement added;
2.2.1	10/2024	Minor edit; Renumbered pervious 2.43.1
2.2.1.1	10/2024	Minor edit; Renumbered pervious 2.43.1.1
2.2.1.1(a)(1)(i)	10/2024	Airship or powered-lift removed
2.2.1.1(a)(1)(ii)	10/2024	Editorial change: Airship or powered-lift removed
2.2.1.1(a)(1)(vi)	10/2024	Editorial change: Airship or powered-lift removed
2.2.1.1(a)(2)	10/2024	Editorial change: FE license removed
2.2.1.1(a)(3)	10/2024	Editorial change: FN License removed
2.2.1.1(a)(4)	10/2024	Editorial change: FOO License removed
2.2.1.1(a)(5)	10/2024	Editorial change: FI License removed
2.2.1.1(a)(6)	10/2024	Editorial change: GI License removed
2.2.1.1(a)(7)	10/2024	Editorial change: Renumbered previous
2.2.1.1(a)(8)	10/2024	Editorial change: ARS License removed
2.2.1.1(a)(9)	10/2024	Editorial change: PR License removed
2.2.1.1(a)(11)	10/2024	Editorial change: Flight radiotelephone operator license removed
2.2.1.1(a)(11)	10/2024	Editorial change: Notes removed

Location	Date	Description
2.2.1.2(a)(1)(iii)	10/2024	Editorial change: Glider removed
2.2.1.2(a)(1)(iv)	10/2024	Editorial change: Free balloon removed
2.2.1.2(a)(2)(ii)	10/2024	Editorial change: Single-engine sea – aeroplane removed
2.2.1.2(a)(2)(iv)	10/2024	Editorial change: Multi-engine sea-aeroplane removed
2.2.1.2(a)(2)(v)	10/2024	Editorial change: Hot air-balloon removed
2.2.1.2(a)(2)(vi)	10/2024	Editorial change: Gas-balloon removed
2.2.1.2(a)(4)(iii)	10/2024	Editorial change: Instrument – Powered lift removed
2.2.1.2(a)(4)(iii)	10/2024	Editorial change: Noted adjusted references to CPL, Airship and Powered lift removed
2.2.1.2(a)(5)(i)	10/2024	Editorial change: FI ratings removed
2.2.1.2(b)	10/2024	Editorial change: GI License and 2.2.1.2(b)(1)(2)(3) ratings removed
2.2.1.2(c)	10/2024	Editorial change: FE License and 2.2.1.2(c)(1)(2)(3) ratings removed
2.2.1.2(g)	10/2024	Editorial change: ARS license removed
2.2.1.2(h)	10/2024	Editorial change: PR license and 2.2.1.2(h)(1)(2)(3)(4) ratings removed
2.2.1.3 (a)	10/2024	Editorial change: Minor grammatical edit
2.2.1.3 (a)(1)	10/2024	Minor grammatical edit
2.2.1.3 (a)(2)	10/2024	Minor grammatical edit
2.2.1.3 (a)(2)	10/2024	Note added
2.2.1.3 (b)(b)(1)(b)(2)	10/2024	Minor edit
2.2.1.3 (c)	10/2024	Minor grammatical edit
2.2.1.3 (c)(1)	10/2024	Minor edit
2.2.1.4(a)	10/2024	Minor edit
2.2.1.4(a)(1)	10/2024	Editorial change FI license removed
2.2.1.4(a)(2)	10/2024	Editorial change: FE license and FN license removed
2.2.1.4(a)(3)	10/2024	Editorial change: AMT License added
2.2.1.4(b)	10/2024	Editorial change: FE license and FN license removed
2.2.1.4(b)(1)	10/2024	Editorial change: Subpar removed
2.2.1.5	10/2024	
2.2.1.5(a)(4)	10/2024	Editorial change: Night vision goggles endorsement removed
2.2.1.6(a)	10/2024	Minor edit
2.2.1.6(a)(2)	10/2024	Editorial change: DFEE removed
2.2.1.6(a)(3)	10/2024	Editorial change: DFNE removed
2.2.1.6(a)(4)	10/2024	Editorial change: DFOODE removed

Location	Date	Description
2.2.1.6(a)(5)	10/2024	Editorial change: DME removed
2.2.1.6(a)(6)	10/2024	Editorial change: CAME changed to AME
2.2.1.7	10/2024	Editorial change: Designations added
2.2.1.7(a)(b)(1)	10/2024	Minor edit
2.2.1.7(c)(d)(1)(d)(2)	10/2024	Minor grammatical edit
2.2.1.7(e)(1)	10/2024	Editorial change: rating added
2.2.1.7(e)(2)	10/2024	Minor edit
2.2.1.7(f)(1)	10/2024	Added new text on recording of the maintenance of competency of flight crewmembers engage in commercial air transport operation
2.2.1.7(f)(2)	10/2024	Editorial change: 'may' replaced with 'shall'
2.2.1.7(f)(2), (3), (4)	10/2024	Deleted, per Annex 1, Amendment 178, and renumbered
2.2.1.7(f)(3)(4)(5)	10/2024	Added new text on new procedure for maintenance of competency which came into effect as of November 02, 2022
2.2.1.7(g)	10/2024	Added new text on new procedure for maintenance of competency which came into effect as of November 02, 2022
2.2.1.7(g)	10/2024	Deleted applicability date and edited to remove gender-specific pronouns
2.2.1.7(h)	10/2024	Edited to remove gender-specific pronouns
2.2.1.7(h)	10/2024	Minor edits
2.2.1.7(h)	10/2024	Editorial change: FE, FN, FI, DFEE, DFNE license and student pilot authorization removed
2.2.1.7(h)	10/2024	Editorial change: medical fitness requirement for AFISO and AMT License holders added
2.2.2	10/2024	Minor edit: Renumbered previous 2.43
2.2.2(a)	10/2024	Editorial change: FE and FN removed
2.2.2(b)(c)(d)	10/2024	Minor edits
2.2.2(d)	10/2024	Editorial change: note removed
2.2.3	10/2024	Minor edit: Renumbered previous 2.43.3
2.2.3	10/2024	RESERVED
2.2.3.1	10/2024	RESERVED
2.2.3.1(a)	10/2024	Edited to remove gender-specific pronouns
2.2.3.2	10/2024	RESERVED
2.2.3.2(a)	10/2024	Edited to remove gender-specific pronouns
2.2.4	10/2024	Minor edit: Renumbered previous 2.43.4
2.2.4.1	10/2024	Note removed

Location	Date	Description
2.2.4.1(a)(2)	10/2024	Minor grammatical edits
2.2.4.1(a)(3)	10/2024	Editorial change: "a medical certificate issued under this part" removed
2.2.4.1(a)(3)	10/2024	Edited to remove gender-specific pronouns
2.2.4.1(a)(3)(i)(4)(4)(i)	10/2024	Minor edits
2.2.4.1(a)(5)(b)(c)	10/2024	Minor grammatical edits
2.2.4.1(c)	10/2024	Removed note numbering below table and edited to remove gender-specific pronouns
2.2.4.1(c)(1)(ii)	10/2024	Editorial change: subject 'Meteorology' removed
2.2.4.1(c)(1)(iii)	10/2024	Editorial change: subject 'Operational procedures' removed
2.2.4.1(c)(1)(iv)	10/2024	Editorial change: subject 'RT' removed
2.2.4.1(c)(1)(v)	10/2024	Editorial change: subject 'Navigation' removed
2.2.4.1(c)(3)	10/2024	Editorial change: 'the applicant shall' added
2.2.4.2	10/2024	Minor edit: Renumbered previous 2.43.4.1
2.2.4.2(a)(1)	10/2024	Minor edits
2.2.4.2(a)(2)(i)	10/2024	Editorial change: sentence restructured combined 2.2.4.2(a)(2)(i) and 2.2.4.2(a)(2)(ii
2.2.4.2(a)(2)(ii)	10/2024	Editorial change: sentence restructured combined 2.2.4.2(a)(2)(i) and 2.2.4.2(a)(2)(ii
2.2.4.2(a)(2)(ii)	10/2024	Minor edit: Renumbered previous 2.2.4.2(a)(2)(iii)
2.2.4.2(a)(2)(iii)(iv)	10/2024	Minor edits
2.2.4.2(a)(2)(v)(B)	10/2024	Editorial change: Meteorology removed from required subject
2.2.4.2(a)(2)(v)(C)	10/2024	Editorial change: Operational Procedures removed from required subject
2.2.4.2(a)(2)(v)(D)	10/2024	Editorial change: RT removed from required subject
2.2.4.2(a)(2)(v)(E)	10/2024	Editorial change: Navigation removed from required subject
2.2.4.2(b)	10/2024	MPLs removed
2.2.4.2(b)(1)	10/2024	Minor edits, MPL removed
2.2.4.2(b)(1)(i)(2)(2)(i)	10/2024	Minor edits
2.2.4.2(b)(2)(ii)	10/2024	Editorial change: number of flight hours changed from 75 hours to 100 hours
2.2.4.2(b)(2)(iii)	10/2024	Editorial change: number of flight hours changed from 75 hours to 100 hours
2.2.4.2(b)(3)	10/2024	Minor edits
2.2.4.3(a)(a)(1)(a)(2)(a)(3)(a)(4)	10/2024	Minor edits
2.2.4.3(a)(4)(ii)	10/2024	Editorial change: Meteorology removed from required subject

Location	Date	Description
2.2.4.3(a)(4)(iii)	10/2024	Editorial change: Operational Procedures removed from required subject
2.2.4.3(a)(4)(iv)	10/2024	Editorial change: RT removed from required subject
2.2.4.3(a)(4)(v)	10/2024	Editorial change: Navigation removed from required subject
2.2.4.3(b)(2)	10/2024	Minor edits
2.2.4.3(b)(3)	10/2024	Editorial change: the phrase 'language of Sint Maarten' removed
2.2.4.3(c)	10/2024	Minor edits
2.2.4.3(e)	10/2024	Minor grammatical edits
2.2.4.4(a)(a)(1)(a)(2)	10/2024	Minor edits
2.2.4.4(a)(3)	10/2024	Editorial change: Note 1 and Note 2
2.2.4.4(b)(2)	10/2024	Minor edits
2.2.4.4(b)(3)	10/2024	Editorial change: the phrase 'language of Sint Maarten' removed
2.2.4.4(c)	10/2024	Minor edits
2.2.4.4(c)(2)	10/2024	Editorial change: Meteorology removed from required subject
2.2.4.4(c)(3)	10/2024	Editorial change: Operational Procedures removed from required subject
2.2.4.4(c)(4)	10/2024	Editorial change: RT removed from required subject
2.2.4.4(c)(5)	10/2024	Editorial change: Navigation removed from required subject
2.2.4.4(d)	10/2024	Minor edits
2.2.4.4(e)	10/2024	Minor grammatical edits
2.2.4.5(a)(b)	10/2024	Minor edits
2.2.4.6	10/2024	Reserved
2.2.4.7(a)(1)	10/2024	Minor grammatical edits
2.2.4.7(a)(1)(i)	10/2024	Editorial change:"(e.g. logbook)" added
2.2.4.7(a)(1)(ii)	10/2024	Editorial change: the phrase 'language of Sint Maarten' removed and sentenced restructured
2.2.4.7(a)(2)	10/2024	Minor edits
2.2.4.7(a)(4)	10/2024	Editorial change: "will" replaced with "shall"
2.2.4.7(b)(b)(3)	10/2024	Minor edits
2.2.4.7(c)	10/2024	Edited to remove gender-specific pronouns
2.2.4.7(c)	10/2024	Minor grammatical edits
2.2.4.7(d)	10/2024	Editorial change: change four (4) year to two (2) year
2.2.4.8	10/2024	Reserved
2.2.4.8(a)(4)	10/2024	Edited to remove gender-specific pronouns

Location	Date	Description
2.2.4.8(d)(1)	10/2024	Edited to remove gender-specific pronouns
2.2.4.9	10/2024	Spelled out AMT in title
2.2.4.9(a)	10/2024	Editorial change: added 2.2.4.8
2.2.4.9(a)(1)(a)(2)(a)(3)(a)(4)(a)(4)(a)(ii)( 4)(a)(iii)	10/2024	Minor edits
2.2.4.9(a)(5)(i)	10/2024	Editorial change: "e.g., logbook" added
2.2.4.9(a)(6)	10/2024	Editorial change: the phrase 'language of Sint Maarten' removed
2.2.4.9(c)	10/2024	Editorial change: "will" replaced with "shall"
2.2.4.9(d)	10/2024	Minor grammatical edits
2.2.4.10	10/2024	Reserved
2.2.4.10	10/2024	Spelled out AMT in title
2.2.4.11	10/2024	Reserved
2.2.5.1(a)(1)(a)(2)	10/2024	Minor edits
2.2.5.2	10/2024	Added new (g), updated note to reflect change in ICAO Annex 1, Amendment 176
2.2.5.2(f)	10/2024	Deleted applicability date
2.2.5.3	10/2024	FSTDS Acronym spelled out
2.2.5.2(a)(b)(c)(d)(e)(f)	10/2024	Minor edits
2.2.5.3(a)(b)(e)(f)(g)	10/2024	Minor edits
2.2.5.4(b)	10/2024	Editorial change "will" replaced with "shall"
2.2.5.5	10/2024	Note on difference in endorsement requirements in each license added
2.2.5.5(c)	10/2024	Editorial change text reworded for clarity
2.2.5.5(c)(3)(e)(2)(f)(f)(1)	10/2024	Minor edits
2.2.5.5(f)(2)	10/2024	Editorial change "shall" added
2.2.5.5(f)(3)	10/2024	Minor edits
2.2.5.5(f)(4)	10/2024	Editorial change, sentence lengthened including text for scenarios where the applicant is not the owner of the registered aircraft
2.2.5.5(f)(5)(5)(i)(5)(ii)	10/2024	Minor edits
2.2.5.5(f)(5)(iii)	10/2024	Editorial change, "flight deck" replaced "cockpit"
2.2.5.5(g)	10/2024	Minor edits and editorial change "shall" replace "must"
2.2.5.5(h)(1)(ii)	10/2024	Minor edits
2.2.5.5(h)(2)(i)(ii)(iii)	10/2024	Text removed; not applicable FI license not issued on Sint Maarten
2.2.5.5(h)(2)	10/2024	Changed "certified" to "certificated"

Location	Date	Description
2.2.5.6(a)	10/2024	Editorial change, requirement for an agreement with the Contracting State where to the ATO is located removed
2.2.6(a)	10/2024	Editorial change, "shall" added
2.2.6(a)(9)(b)	10/2024	Minor edits
2.2.7	10/2024	Editorial change replaced 'Director of Civil Aviation' with 'on its behalf'
2.2.7(b)	10/2024	Minor edits
2.2.8	10/2024	Revised to reflect changes in ICAO Annex 1, Amendment 178, and added note
2.2.9	10/2024	Minor edits to Note 1
2.2.9.1(a)	10/2024	the legislative instrument for suspension of license or validation of certificates, the National regulation containing general measures on Civil aviation safety Oversight added
2.2.9.1(a)(2)	10/2024	Editorial changes, shall replace with will and sentence restructured
2.2.9.1(a)(3)	10/2024	Editorial change "sentence restructured"
2.2.9.1(a)(3) and (4)	10/2024	Edited to remove gender-specific pronouns
2.2.9.1(a)(3)(iv)	10/2024	Minor edit
2.2.9.1(a)(4)	10/2024	Editorial change "adjusted sentence"
2.2.9.1(a)(5)	10/2024	Editorial change "will" replace "shall"
2.2.9.1(a)(6)(i)	10/2024	Minor edits
2.2.9.1(a)(7)	10/2024	Editorial change "will" replace "shall"
2.2.9.2(b)	10/2024	Editorial change "adjusted sentence" change from passive to active tense
2.2.9.2(c)	10/2024	Editorial change "adjusted sentence" change from passive to active tense
2.2.9.2(d)	10/2024	Edited to remove gender-specific pronouns
2.2.9.3(d) and (e)	10/2024	Edited to remove gender-specific pronouns
2.2.9.2(f)	10/2024	Editorial change "adjusted sentence" change from passive to active tense
2.2.9.3(b)(c)	10/2024	Minor edit
2.3	10/2024	Moved note below title and removed asterisks.
2.3.1.2	10/2024	Editorial change "designation added to heading"
2.3.1.2(a)	10/2024	Minor edit
2.3.1.2(b) and note	10/2024	Deleted applicability date
2.3.1.3	10/2024	Revised title
2.3.1.3(a)	10/2024	Deleted applicability date
2.3.1.3(b)	10/2024	Minor edit

Location	Date	Description
2.3.1.4(b)(c)	10/2024	Minor edits
2.3.1.5	10/2024	Edited to remove gender-specific pronouns
2.3.1.5(a)	10/2024	Minor edits
2.3.1.6	10/2024	Minor edits to Note
$\begin{array}{c} 2.3.1.6(a)(b)(1)(b)(3)(II)(b)(4)(c)(1)(c)(2)(\\ d)(e)(e)(1)(e)(3)(f)(1)(f)(2)(ii)(f)(2)(iii) \end{array}$	10/2024	Minor edits
2.3.1.6(g)	10/2024	Rules on Night Vision goggle operations removed
2.3.1.7(a)(a)(1)(a)(2)	10/2024	Minor edit
2.3.2.1(a)(a)(1)(d)	10/2024	Minor edit
2.3.2.2(c)(2)(ii) (c)(2)(iv)(e)	10/2024	Minor edit
2.3.1.6(c) and (d)	10/2024	Changed "certified" to "certificated" and edited to remove gender-specific pronouns
2.3.2.2(c)(2)(ii)	10/2024	Edited to remove gender-specific pronouns
2.3.2.3(c)(2)(ii)	10/2024	Edited to remove gender-specific pronouns
2.3.2.3(e)	10/2024	Editorial changed validity period of multi-engine class rating from 1 year to 2 years
2.3.2.4(b)	10/2024	Editorial change "sentence adjusted"
2.3.2.4(b)(1)(b)(2)	10/2024	Minor edits
2.3.2.4(b)(3)	10/2024	Edited to remove gender-specific pronouns
2.3.2.4(b)(4)	10/2024	New text added requirement for type rating
2.3.2.4(b)(5)	10/2024	New text added specifically for ATPL level on requirement for type rating
2.3.2.4(b)(6)	10/2024	Minor edit renumbered
2.3.2.4(b)(7)	10/2024	Minor edit renumbered
2.3.2.4(c)	10/2024	Minor edit
2.3.2.4(d)	10/2024	Editorial changed validity period of type rating from 1 year to 2 years
2.3.2.4(e)	10/2024	Minor edit "renumbered"
2.3.2.4(e)(1)(ii)	10/2024	Editorial change renewal requirement change to '3 take-off and landing with the type rated aircraft or simulator'
2.3.2.4(f)	10/2024	Minor edit
2.3.2.4(f)	10/2024	Editorial change to include upset prevention and recovery with type rating
2.3.2.5(a)(b)(1)(b)(2)(c)(d)(e)(f)(h)(i)	10/2024	Minor edits
2.3.2.5(g)	10/2024	Editorial change "or" replace "and"
2.3.2.6(a)(a)(1)	10/2024	Minor edits
2.3.2.7(a)(a)(1)	10/2024	Minor edits
2.3.2.8(a)	10/2024	Minor edits

Location	Date	Description
2.3.2.8(a)(2)	10/2024	Renumbered, Minor edits
2.3.2.9	10/2024	Reserved "not currently applicable to Sint Maarten"
2.3.3	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.3.3.1	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.3.3.2	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.3.3.3	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.3.3.4	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.3.3.5	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.3.3.6	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.3.3.7	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.3.4.1(a)(1)	10/2024	Editorial change terms "balloon and glider" removed
2.3.4.1(a)(2)	10/2024	Minor grammatical edit
2.3.4.1(c)(c)(1)(c)(2)(i)	10/2024	Minor edits
2.3.4.1(c)(2)(iii)	10/2024	Editorial change powered lift category removed
2.3.4.1(c)(2)(iv)	10/2024	Knowledge requirement for airship removed
2.3.4.1(c)(3)(iii)(c)(7)(v)(c)(8)(i)(c)(9)	10/2024	Minor edits
2.3.4.1(d)(1)(ii)	10/2024	Editorial change term "and' added
2.3.4.1(d)(2)	10/2024	Editorial changes "paragraph 2.3.4.1(c) of this subsection" added
2.3.4.1(e)(f)(1)(2)(3)(i)(j)	10/2024	Minor edits
2.3.4.1(f)	10/2024	Minor edits
2.3.4.1(j)	10/2024	Editorial change the term "shall" added
2.3.4.2(a)(1)	10/2024	Editorial change for flights experience from 55 hours to 40 hours
2.3.4.2(a)(2)	10/2024	Editorial change term "for a PPL(A)" added
2.3.4.2(b)(1)	10/2024	Minor edits
2.3.4.2(b)(2)	10/2024	Editorial change term "for a PPL(A)" added
2.3.4.2(b)(2)(i)	10/2024	New text added "Recognize and manage threats and errors"
2.3.4.2(b)(2)(xii) (xiii) (xiv)	10/2024	Minor edits
2.3.4.2(b)(3)	10/2024	New text on requirements for PPL(A) exercising the privileges for the license at night added

Location	Date	Description
2.3.4.3(a)(1)	10/2024	Editorial change for flights experience from 55 hours to 40 hours
2.3.4.3(a)(2)	10/2024	Editorial change term "for a PPL(H)" added
2.3.4.3(b)(1)	10/2024	Minor edits
2.3.4.3(b)(2)	10/2024	Editorial change term "for a PPL(H)" added
2.3.4.3(b)(2)(xi)	10/2024	Editorial changes "RT procedures and phraseology" added
2.3.4.3(b)(2)(xii)	10/2024	Editorial changes new text added
2.3.4.3(b)(2)(xiv)	10/2024	Minor edits
2.3.4.3(b)(3)	10/2024	New text on requirements for PPL(H) exercising the privileges for the license at night added
2.3.4.3(c)	10/2024	Editorial change text "the CAA STSs for PPL(H)" added
2.3.4.4	10/2024	Reserved "not currently applicable to Sint Maarten"
2.3.4.5	10/2024	Reserved "not currently applicable to Sint Maarten"
2.3.4.6	10/2024	Reserved "not currently applicable to Sint Maarten"
2.3.4.7	10/2024	Reserved "not currently applicable to Sint Maarten"
2.3.5.1(a) (c)(1)(ii) (3)(iii) (iv) (5)(ii) 6)(ii) )(A) (7)(vii) (c)(9))(ii)(d)(1)(ii)(2)(f)(1)(g)(2)(3)(4)(i)(j)	10/2024	Minor edits
2.3.5.1(h)	10/2024	Validity period of a CPL changed from 5 years to 2 years
2.3.5.2	10/2024	Experience (a)(1) – changed 10 hours to 20 hours
2.3.5.2(a)(2)	10/2024	Editorial change "sentence reworded for clarity"
2.3.5.2(a)(2)(iii)(3)(ii)(iii)	10/2024	Minor edits
2.3.5.2(b)(1)(2)(xiii)(2)(xiv)	10/2024	Minor edits
2.3.5.2(b)(2)(v)	10/2024	Editorial change term "spin avoidance" added
2.3.5.2(c)	10/2024	Minor edits and reference to IS2.3.5.2 removed and replace with "the CAA STS for CPL
2.3.5.2	10/2024	Note on upset prevention and recovery training
2.3.5.3(a)(1)(2)(iii)(b)(1)(2)(xii)	10/2024	Minor edits
2.3.5.3(b)	10/2024	(xiii and xiv) two (2) new subject for flight instructor added
2.3.5.3(b)	10/2024	Editorial change I hour of navigation included for requirements for exercising the privileges of a CPL(H) at night
2.3.5.3(c)	10/2024	Minor edits and reference to IS2.3.5.3 removed and replace with "the CAA STS for CPL(H)
2.3.5.4	10/2024	Reserved "activities not being carried out in Sint Maarten"

Location	Date	Description
2.3.5.5	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.3.6	10/2024	MPL – Added new note from ICAO Annex 1, Amendment 176
2.3.6.1	10/2024	MPL (c) totally revised to address competencies, (d) Knowledge and (f) Skill revised due to ICAO Annex 1, Amendment 176
2.3.6.1	10/2024	Notes on MPLA curriculum, granting of single pilot privileges and curtailing of a license holder privileges when they reach their 65 <sup>th</sup> birthday added to this subsection
2.3.6.1(a)(b)(d)(1)(ii)(2)(e)(f)(1)(2)(3)(4)(5 )(g)(1)(i)(ii)(iii)(2)(3)(i)(ii)(iii)	10/2024	Minor edits
2.3.6.2	10/2024	MPL (a) Experience and (b) Flight Instruction revised due to ICAO Annex 1, Amendment 176
2.3.6.2	10/2024	Note on aeroplane upset prevention and recovery training added to this subsection.
2.3.6.2(a)(1)(2)(b)(c)	10/2024	Minor edits
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	10/2024	Minor edits
2.3.7.1(g)	10/2024	Editorial change
2.3.7.2	10/2024	Note on aeroplane upset prevention and recovery training added to this subsection.
2.3.7.2(a)(1)(i)(ii)(iv)(2)	10/2024	Minor edits
2.3.7.2(a)	10/2024	Renumbered previous 2.3.7.2(a)3 CRM course requirement deleted
2.3.7.2(c)	10/2024	Minor edits
2.3.7.3(a)(1)(i)(ii)(iv)	10/2024	Minor edits
2.3.7.3(a)(2)	10/2024	Renumbered previous 2.3.7.3(a)3 CRM course requirement deleted
2.3.7.3(a)	10/2024	Renumbered
2.3.7.3(b)(c)	10/2024	Minor edits
2.3.7.4(a)(1)(iv)(2)(3)(b)(c)	10/2024	Minor edits
2.3.7.4(a)(1)(i)	10/2024	Editorial changes' sentence restructured'
2.3.7.4(a)(1)(ii)	10/2024	Editorial changes' sentence restructured'
2.3.8.1	10/2024	IR – Knowledge (c)(2)(i) and (c)(6)(i) and (ii) revised due to ICAO Annex 1, Amendment 176
	10/2024	Note added on the option of combining the IR rating with other licenses
2.3.8.1(b)	10/2024	Edited to remove gender-specific pronouns
2.3.8.2(a)(2)(ii)(b)(2)(i)(3)	10/2024	Minor edits

Location	Date	Description
2.3.8.2(a)(1)(b)(1)(i)	10/2024	Minor grammatical edits
2.3.8.2(c)	10/2024	Editorial change term "have" added
2.3.8.2(c)(1)	10/2024	Editorial change term "have" removed
2.3.8.2(c)(2)	10/2024	Editorial change term "have" removed and other minor edits
2.3.8.2(c)(3)	10/2024	Editorial change term "have" removed and other minor edits
2.3.8.2(d)	10/2024	Minor edits
2.3.9	10/2024	
2.3.9.1(a)(1)	10/2024	Reserved "not currently applicable to Sint Maarten"
2.3.9.1(a)(3)(i)(ii)(iii)	10/2024	Minor edit
2.3.9.2(a)(b)	10/2024	Minor edit
2.3.9.2(c)(1)	10/2024	
2.3.9.2(c)(2)	10/2024	
2.3.9.2(f)(2)(ii)	10/2024	Changed "certified" to "certificated"
2.3.9.2(g)	10/2024	Editorial change
2.3.9.2(i)(2)(iii), (i)(3), and (m)(3)	10/2024	Edited to remove gender-specific pronouns
2.3.9.4	10/2024	(d)(4) removed and renumbered
2.3.10.1	10/2024	Minor edits
2.3.10.1	10/2024	Spelled out DPE in title
2.3.10.1(a)	10/2024	Minor edits
2.3.10.1(b)	10/2024	Minor edits
2.3.10.1(c)	10/2024	Minor edits
2.3.10.1(c)(1)	10/2024	Minor edits
2.3.10.1(c)(2)	10/2024	Minor edits
2.3.10.1(c)(4)	10/2024	Minor edits
2.3.10.1(d)	10/2024	Minor edits
2.3.10.1(e)	10/2024	Minor edits
2.3.10.1(f)	10/2024	Minor edits
2.3.10.1(f)(2)	10/2024	Minor edits
2.3.10.1(f)(2)(ii)	10/2024	Minor edits
2.3.10.1(f)(2)(iii)	10/2024	Minor edits
2.3.10.1(g)	10/2024	Minor edits
2.3.10.1(i)	10/2024	Minor edits
2.3.10.1(i)(2)	10/2024	Minor edits
2.3.10.1(j)	10/2024	Minor edits
2.3.10.1(k)	10/2024	Minor edits
2.3.10.2	10/2024	Minor edits

Location	Date	Description
2.3.10.2(a)	10/2024	Minor edits
2.3.10.2(a)(1)	10/2024	Minor edits
2.3.10.2(a)(2)	10/2024	Minor edits
2.3.10.2(a)(3)	10/2024	Minor edits
2.3.10.2(a)(3)(ii)	10/2024	Minor edits
2.3.10.2(a)(4)	10/2024	Minor edits
2.3.10.2(b)	10/2024	Minor edits
2.3.10.2(b)(1)	10/2024	Minor edits
2.3.10.2(b)(2)	10/2024	Minor edits
2.3.10.2(b)(3)	10/2024	Minor edits
2.3.10.2(b)(4)	10/2024	Minor edits
2.3.10.2(c)	10/2024	Minor edits
2.3.10.2(c)(1)	10/2024	Minor edits
2.3.10.2(c)(2)	10/2024	Minor edits
2.3.10.2(c)(3)	10/2024	Minor edits
2.3.10.2(c)(4)	10/2024	Minor edits
2.3.10.2(d)(1)	10/2024	Minor edits
2.3.10.2(d)(2)	10/2024	Minor edits
2.3.10.2(d)(3)	10/2024	Minor edits
2.3.10.2(d)(4)	10/2024	Minor edits
2.3.10.3(a)(1)	10/2024	Minor edits
2.3.10.3(a)(2)	10/2024	Minor edits
2.3.10.3(a)(3)	10/2024	Minor edits
2.3.10.3(a)(3)(ii)	10/2024	Minor edits
2.3.10.3(a)(3)(v)	10/2024	Minor edits
2.3.10.3(a)(4)	10/2024	Minor edits
2.3.10.3(b)(1)	10/2024	Minor edits
2.3.10.3(b)(2)	10/2024	Minor edits
2.3.10.3(b)(3)	10/2024	Minor edits
2.3.10.3(b)(3)(iii)	10/2024	Minor edits
2.3.10.3(b)(4)	10/2024	Minor edits
2.3.10.3(c)(1)	10/2024	Minor edits
2.3.10.3(c)(2)	10/2024	Minor edits
2.3.10.3(c)(3)	10/2024	Minor edits
2.3.10.3(c)(3)(iv)	10/2024	Minor edits
2.3.10.3(c)(4)	10/2024	Minor edits
2.3.10.4(a)(1)	10/2024	Minor edits

Location	Date	Description
2.3.10.4(a)(2)	10/2024	Minor edits
2.3.10.4(a)(3)	10/2024	Minor edits
2.3.10.4(a)(3)(ii)	10/2024	Minor edits
2.3.10.4(a)(4)	10/2024	Minor edits
2.3.10.4(b)	10/2024	Minor edits
2.3.10.4(b)(1)	10/2024	Minor edits
2.3.10.4(b)(2)	10/2024	Minor edits
2.3.10.4(b)(3)	10/2024	Minor edits
2.3.10.4(b)(4)	10/2024	Minor edits
2.3.10.5	10/2024	Minor edits
2.3.10.5(a)(1)	10/2024	Minor edits
2.3.10.5(a)(2)	10/2024	Minor edits
2.3.10.5(a)(3)	10/2024	Minor edits
2.3.10.5(a)(3)(ii)	10/2024	Minor edits
2.3.10.5(a)(3)(vi)	10/2024	Minor edits
2.3.10.5(a)(4)	10/2024	Minor edits
2.3.10.5(a)(4)(iii)	10/2024	Minor edits
2.3.10.5(b)(1)	10/2024	Minor edits
2.3.10.5(b)(2)	10/2024	Minor edits
2.3.10.5(b)(3)	10/2024	Minor edits
2.3.10.5(b)(3)(iii)	10/2024	Minor edits
2.3.10.5(b)(4)(i)	10/2024	Minor edits
2.3.10.5(c)(1)	10/2024	Minor edits
2.3.10.5(c)(2)	10/2024	Minor edits
2.3.10.5(c)(3)	10/2024	Minor edits
2.3.10.5(c)(3)(iv)	10/2024	Minor edits
2.3.10.5(c)(4)	10/2024	Minor edits
2.3.10.5(c)(4)(ii)	10/2024	Minor edits
2.3.10.6	10/2024	Minor edits
2.3.10.6(a)(1)	10/2024	Minor edits
2.3.10.6(a)(2)	10/2024	Minor edits
2.3.11	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.4		Reserved "activities not being carried out in Sint Maarten"
2.4.2	10/2024	Changed "Licenses" to "License" in title
2.4.3	10/2024	Revised title to add remote flight crew member

Location	Date	Description
2.4.3(a), (c)	10/2024	Deleted applicability date
2.4.3(d)	10/2024	Deleted applicability date and note
2.4.4.3(a)	10/2024	Edited to remove gender-specific pronouns
2.4.5.1(h)	10/2024	Edited to remove gender-specific pronouns
2.5	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.5.4.1(i)	10/2024	Edited to remove gender-specific pronouns
2.5.5.1(h)	10/2024	Edited to remove gender-specific pronouns
2.6	10/2024	Revised entire chapter to European Aviation Safety Agency (EASA) rules on the subject
2.6.1	10/2024	Revised entire paragraph to EASA rules
2.6.1.1	10/2024	Renumbered EASA rules on topic added
<u>2.6.1.2</u>	10/2024	Renumbered EASA License categories added
<u>2.6.1.3</u>	10/2024	Renumbered EASA rules on ratings groups for aircraft maintenance license
<u>2.6.1.4</u>	10/2024	Renumbered EASA rules on application for AMT license added, 2.6.1.4a removed form number
<u>2.6.1.5</u>	10/2024	Renumbered EASA rules on eligibility added
<u>2.6.1.6</u>	10/2024	Renumbered EASA rules on AMT license privileges added
<u>2.6.1.7</u>	10/2024	Renumbered EASA AMT basic knowledge requirements added
<u>2.6.1.8</u>	10/2024	Renumbered EASA AMT basic experience requirements added 2.6.1.8a edited to 1 year
2.6.1.9	10/2024	Reserved
2.6.1.10	10/2024	license added
<u>2.6.1.11</u>	10/2024	Renumbered EASA rules on endorsement with aircraft ratings added
2.6.1.12	10/2024	Renumbered EASA AMT license limitations added
2.6.1.13	10/2024	Renumbered EASA requirement on proof of evidence of qualification added
<u>2.6.1.14</u>	10/2024	Renumbered EASA rules on AMT license conversion added
2.6.2	10/2024	Revised entire paragraph EASA rules on AMT license procedure for the Authority added
2.6.2.1	10/2024	Revised entire paragraph to scope of chapter added base on EASA rulemaking
2.6.2.2	10/2024	Revised entire paragraph EASA rules on the AMT license authority, procedures, resources, general added
2.6.2.3	10/2024	Revised entire paragraph EASA rules on record keeping added
2.6.2.4	10/2024	Revised entire paragraph EASA rules on mutual exchange of information added

Location	Date	Description
2.6.2.4	10/2024	Spelled out AMT in title
2.6.2.5	10/2024	Revised entire paragraph EASA rules on exemptions added
2.6.2.6	10/2024	AMT License – notes updated regarding training due to ICAO Annex 1, Amendment 176
2.6.2.7	10/2024	Revised entire paragraph EASA procedures for issuance of AMT license via an AMO in accordance with part 6 added
2.6.2.7(a)	10/2024	Edited to remove gender-specific pronouns
2.6.2.8	10/2024	Revised entire paragraph EASA procedures for change of an AMT license to include an additional basic category or subcategory added
2.6.2.8(a) and (e)(1)	10/2024	Edited to remove gender-specific pronouns
2.6.2.8(g)	10/2024	Deleted applicability date
2.6.2.9	10/2024	Revised entire paragraph EASA procedure for the change of an AMT license to include an aircraft rating or to remove limitations added
2.6.2.9	10/2024	Spelled out AMT in title
2.6.2.9(a)	10/2024	Texted adjusted to "an approved CAA form"
2.6.2.9(b)	10/2024	Edited to remove gender-specific pronouns
2.6.2.10	10/2024	Revised entire paragraph EASA procedure for the renewal of an aircraft maintenance license validity added
2.6.2.10(a)	10/2024	Edited to remove gender-specific pronouns
2.6.2.11	10/2024	Revised entire paragraph EASA procedure for the conversion of licenses including group ratings
2.6.2.11(a)	10/2024	Edited to remove gender-specific pronouns
<u>2.6.2.12</u>	10/2024	Renumbered EASA procedure for the direct approval of aircraft type training
<u>2.6.2.13</u>	10/2024	Renumbered EASA rules on AMT examination procedures added
<u>2.6.2.14</u>	10/2024	Renumbered EASA general rues on conversion of certifying staff qualifications added
<u>2.6.2.15</u>	10/2024	Renumbered EASA rules on conversion of amt licenses by reliance upon the licensing system of another contracting state added
<u>2.6.2.16</u>	10/2024	Renumbered EASA rules on conversion report for national qualifications added
<u>2.6.2.17</u>	10/2024	Renumbered EASA rules on conversion report for approved maintenance organizations authorizations added
2.6.2.18	10/2024	Renumbered EASA general rules on examination credits added
2.6.2.19	10/2024	Renumbered EASA rules on examination credit report added

Location	Date	Description
2.6.2.20	10/2024	Renumbered EASA rules on examination credit validity added
2.6.2.21	10/2024	Renumbered EASA rules on revocation, suspension or limitation of the AMT added
2.6.3	10/2024	Moved text previously contained in 2.6.6' and renumbered
2.6.3.1	10/2024	Moved text previously contained in 2.6.6'1 and renumbered
2.6.3.2	10/2024	Moved text previously contained in 2.6.6'2 and renumbered
2.6.3.2(b)	10/2024	Edited to remove gender-specific pronouns
2.6.3.3	10/2024	Moved text previously contained in 2.6.6'3 and renumbered
2.6.3.4	10/2024	Moved text previously contained in 2.6.6'4 and renumbered
2.6.3.4(b)(3)	10/2024	Edited to remove gender-specific pronouns
2.6.3.5	10/2024	Moved text previously contained in 2.6.6'5 and renumbered
2.6.3.6	10/2024	Moved text previously contained in 2.6.6'6 and renumbered
2.6.3.6(c)(1) and (6)	10/2024	Edited to remove gender-specific pronouns
2.6.3.7	10/2024	Moved text previously contained in 2.6.6'7 and renumbered
2.6.4.2(a)(4) and (6)	10/2024	Edited to remove gender-specific pronouns
2.6.4.6(b)	10/2024	Edited to remove gender-specific pronouns
2.6.5.1(e)	10/2024	Edited to remove gender-specific pronouns
2.6.6.5(a)	10/2024	Edited to remove gender-specific pronouns
2.7	10/2024	Changed "Licenses" to "License" in title
2.7.1(a)	10/2024	Minor edits
2.7.2(a)	10/2024	Minor edits
2.7.3.1(a)(b)	10/2024	The term "will" replaced with "shall"
2.7.3.2(a)(b)(c)(c)(1)(i)	10/2024	Minor edits
2.7.3.2(c)(4)(i)(6)(i)(7)(i)	10/2024	Minor edits
2.7.3.2(e)	10/2024	Air Traffic Controller License – Experience at (e)(1)(2) updated due to ICAO Annex 1, Amendment 176
2.7.3.2(f)	10/2024	Validity period for ATC license change from 5 years to 2 years
2.7.3.3	10/2024	Air Traffic Controller License Ratings – Experience at (d)(1)(ii) updated, (d)(1)(iii) removed, and (d)(2) added, due to ICAO Annex 1, Amendment 176
2.7.3.3(a)	10/2024	Minor edits

Location	Date	Description
2.7.3.3(a)(1)(2)(3)(4)(5)(6)	10/2024	Minor edits 'acronym spelled out'
2.7.3.3(b)(3)(i)(c)(1)(f)(1)(iv)(f)(2)(f)(3)(g)	10/2024	Minor edits
2.7.4	10/2024	New paragraph on designated examiners added
2.7.4.1	10/2024	Skill requirements for designated examiners added
2.7.4.2	10/2024	Minimum experience requirements added
2.7.5	10/2024	New paragraph on designated ATCO Instructor added
2.7.5.1	10/2024	Requirements and skill test added
2.7.5.2	10/2024	Minimum experience requirements for ATCO instructor added
2.8	10/2024	Editorial change flight dispatcher changed to flight operations officer,
2.8.1(a)	10/2024	Minor edits
2.8.2(a)(c)	10/2024	Minor edits
2.8.3	10/2024	Title change to Validation for a flight operations office license
2.8.3.1	10/2024	Title change to General requirements for validation
2.8.3.1	10/2024	Flight Operations Officer. Revisions made due to ICAO Annex 1, Amendment 176: Knowledge – (b)(1)(i); (2)(iii); (3) three new items added; (4)(i); (7)(i); Experience: (d)(1)(i)(B); Skill – (e) revised to add six new items
2.8.3.1(g)	10/2024	Validation period change from 5 years to 2 years
2.8.3.2	10/2024	Title change from Flight Dispatcher to Flight Operations Officer
2.8.3.2(a)	10/2024	List of FOO license skill test removed from (IS) 2.8.3.2 and placed in the CAA STSs
2.8.4	10/2024	Editorial change flight dispatcher changed to Flight Operations Officer
2.8.4.1	10/2024	Flight dispatcher change to FOO
2.8.4.1(f)	10/2024	Edited to remove gender-specific pronouns
2.8.4.1(a)(b)(1)(c)(d)(e)(f)(f)(1)(g)	10/2024	Flight dispatcher change to FOO
2.8.5	10/2024	Entire chapter Reserved "no designated examiners FOO"
2.9	10/2024	Title change, Meteorological personnel removed from original title
2.9.1	10/2024	Minor edit
2.9.3	10/2024	Editorial change term "license" added
2.9.3(a)	10/2024	Grammatical edit
2.9.3(b)(1)	10/2024	Minor edit
2.9.3(b)(2)	10/2024	Minor edit

Location	Date	Description
2.9.3(b)(3)	10/2024	Minor edit
2.9.3(d)(1)	10/2024	Editorial change the term "shall" inserted into sentence
2.9.3(e)	10/2024	Editorial change the term "shall" inserted into sentence
2.9.3(e)(2)	10/2024	Minor edit
2.9.3(g)	10/2024	License validity period change from 5 years to 2 years
2.9.3(h)	10/2024	Edited to remove gender-specific pronouns
2.9.3(h)	10/2024	Renewal period for the license change from 5 years to 2 years, active an refresher training period change from 1 year to 6 months
2.9.3	10/2024	Added chapter on requirements for designated AFISO instructor; including sub chapters 2.9.3.2 requirements and skill test, 2.9.3.3 Minimum experience requirements
2.9.4	10/2024	Reserved "not currently applicable to Sint Maarten"
2.10	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.1.1	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.1.2	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.1.3	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.1.4	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.1.5	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.1.6	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.1.7	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.1.8	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.1.9	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.1.10	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.1.11	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.1.12	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.1.13	10/2024	Reserved "activities not being carried out in Sint Maarten"

Location	Date	Description
2.10.1.14	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.2	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.2.1	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.3	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.3.1	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.3.2	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.3.3	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.3.4	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.3.5	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.3.6	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.10.3.7	10/2024	Reserved "activities not being carried out in Sint Maarten"
2.11.1.1	10/2024	Notes 1 and 2. 4 and 5 removed
2.11.1.1	10/2024	Renumbered notes
2.11.1.1(a)	10/2024	Minor edit
2.11.1.1(b)	10/2024	Text included on requirements for the medical assessment process for the Class 1, Class 2 and Class 3 license holder
2.11.1.1(c)	10/2024	Text included to allow for the authority to implement aviation related health promotion for license holder to minimize health related safety risks
2.11.1.2(a)	10/2024	Deleted applicability date; editorial, AMT added
2.11.1.2(b)	10/2024	Deleted, per Annex 1, Amendment 178
2.11.1.2(c)	10/2024	Renumbered and deleted applicability date
2.11.1.2(b)	10/2024	Text included to prohibit the exercise of the privileges of their license unless the holder has a current medical certificate, this prohibition is valid until November 2, 2022
2.11.1.3	10/2024	Notes 1, 2, 4 and 5 removed, note 3 renumbered to note
2.11.1.3(a)	10/2024	"AME" replaced "CAME"
2.11.1.3(b)	10/2024	"AME" replaced "CAME"

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Location	Date	Description
2.11.1.3(b)(1)	10/2024	Minor edit
2.11.1.3(b)(2)	10/2024	Minor edit
2.11.1.3(c)	10/2024	"shall" replaced "should"
211.1.3(K)	10/2024	Option to suspend or revoke AME designation added
2.11.1.7 Note	10/2024	Added new text to Note to reflect further ICAO guidance
2.11.1.8(a)(1)(i)(ii)	10/2024	Minor edits
2.11.1.8(b)(1)	10/2024	Term "person" replace with "applicant"
2.11.1.8(b)(1)(i)(ii)	10/2024	"AME" replaced "CAME" and term "Class" inserted in sentence
2.11.1.8(b)(2)	10/2024	Grammatical change phrase 'person to be issued' replace with "applicant for"
2.11.1.8(b)(3)	10/2024	Term "person" replace with "applicant"
2.11.1.8(c)(1)	10/2024	Validity period of AMT license included
2.11.1.8(c)(1)(v)	10/2024	Deleted applicability date
2.11.1.8(c)(2)(A)	10/2024	Validity period of medical certificate for holders passed their 40 <sup>th</sup> changed to 48-month interval for PPL from 60-month interval, the 48 month interval change to 12 month for ATCO. The monthly interval for PPL reduced 24 month and the ATCO interval reduced to 6 months
2.11.1.8(c)(2)(i)(A)	10/2024	Deleted, per Annex 1, Amendment 178
2.11.1.8(c)(2)(ii)(A)	10/2024	Deleted, per Annex 1, Amendment 178
2.11.1.8(c)(2)(i)(B)	10/2024	Grammatical change phrase "holder of a" inserted
2.11.1.8(c)(2)(ii)(B)	10/2024	Removed not applicable,
2.11.1.8(c)(2)(ii)(B)	10/2024	Moved up to (ii) and deleted applicability date
2.11.1.8(c)(2)(i)(C)	10/2024	Renumbered and deleted applicability date
2.11.1.8(c)(2)(iii)(A)	10/2024	Text removed, medical interval already reduced to 6 months after holder passed 40 <sup>th</sup> birthday. Text is redundant.
2.11.1.8(c)(5)	10/2024	Minor grammatical changes
2.11.1.8 (d)(2)	10/2024	Editorial – deleted "authorized"
2.11.1.8 (d)(3)	10/2024	Added text to allow delegation to an AME
2.11.1.8 (f)(1)	10/2024	Minor grammatical changes
2.11.1.8	10/2024	Added a new requirement to (a); (c)(2)(iii) added RPL remove
2.11.1.9(a)	10/2024	AME replace CAME
2.11.2.2	10/2024	Added new text (b) and notes and added references
2.11.2.2(a)	10/2024	certificate replace assessment
2.11.2.2(a)(4)	10/2024	Minor grammatical change that replace which

Location	Date	Description
2.11.2.3(a)(b)	10/2024	Shall replace must
2.11.2.4(b)	10/2024	Term International Commission of Illumination removed
2.11.2.5(b)	10/2024	Minor grammatical change
2.11.2.5(c)	10/2024	Sentence adjusted for clarity
2.11.2.5(e)	10/2024	Minor edits
2.11.2.6 (a)	10/2024	Added new text (1), (4) and note
2.11.2.6(a)(3)	10/2024	Edited to remove gender-specific pronouns
2.11.2.6 (b) (22)(21)(20)	10/2024	Corrects "structure" to "stricture"
2.11.2.6	10/2024	Plural tense change to singular tense through the paragraph, other minor grammatical changes through out
2.11.2.6(b)(14)	10/2024	Shall replace should
2.11.2.6(b)(23)	10/2024	Shall replace should
2.11.2.6(c)(3)	10/2024	Sentence adjusted for clarity
2.11.2.6(c)(4)(5)(6)(7)(8)	10/2024	Minor edits
2.11.2.6(d)(2)	10/2024	Minor edits
2.11.2.6(d)(3)	10/2024	Flight deck replace cockpit
2.11.2.7(a)(1)(3)	10/2024	Minor edits
2.11.2.7(b)(2)(ii)	10/2024	Minor edits
2.11.2.7	10/2024	Note on Mental and behavioral disorders added
2.11.2.7(b)(3)(5)(6)	10/2024	Minor edits
2.11.2.7	10/2024	Note on routine electrocardiography
2.11.2.7(b)(13)(i)	10/2024	Shall replace Should
2.11.2.7	10/2024	Plural tense change to singular tense through the paragraph, other minor grammatical changes through out
2.11.2.7(b)(22)	10/2024	Shall replace should
2.11.2.7(b)	10/2024	Note added on sickle cell trait or other haemoglobinpathic effect on medical assessment
2.11.2.7(b)(26)(31)(33)(35)(36)(39)	10/2024	Minor edits
2.11.2.7(b)	10/2024	Note added on early diagnosis and active management of HIV effect on medical assessment
2.11.2.7(b)	10/2024	Note added effects on a medical assessment as a result of any sequelae after lesions affecting the bones, joints, muscles or tendones
2.11.2.7(b)	10/2024	Note added on diagnostic guidance for determining mental and behavioral disorders
2.11.2.7(b)	10/2024	Note added on the purpose of routine electrocardiography and effect on medical assessment

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Location	Date	Description
2.11.2.7(b)	10/2024	Note added the necessity of periodic chest radiolography
2.11.2.7(c)	10/2024	Note added on the need and use of an ophthalmic report
2.11.2.7(c)(3)(5)(6)(7)(8)	10/2024	Minor edits
2.11.2.7(c)	10/2024	Note added on requirement for applicants who use contact lenses
2.11.2.7(c)	10/2024	Note added on requirements on the use of spectacles
2.11.2.7(c)	10/2024	Note added on the purpose of the required ophthalmic examination
2.11.2.7(c)	10/2024	Note added on requirements for applicants that needs near correction
	10/2024	Note added on steps an applicant must take whenever there is a requirement to obtain or renew correcting
2.11.2.8(a)(1), (2)	10/2024	Deleted applicability date, added AMT
2.11.2.8(b)(2)(ii)(3)(5)(6)	10/2024	Minor edits
2.11.2.8(b)	10/2024	Note added on the purpose of routine electrocardiography and effect on medical assessment
2.11.2.8(b)	10/2024	Note added the necessity of periodic chest radiolography
2.11.2.8(b)	10/2024	Note added on sickle cell trait or other haemoglobinpathic effect on medical assessment
2.11.2.8(b)	10/2024	Note added on early diagnosis and active management of HIV effect on medical assessment
2.11.2.8(b)	10/2024	Note added effects on a medical assessment as a result of any sequelae after lesions affecting the bones, joints, muscles or tendones
2.11.2.8(c)	10/2024	Note added on the need and use of an ophthalmic report
2.11.2.8(c)	10/2024	Note added on requirement for applicants who use contact lenses
2.11.2.8(c)	10/2024	Note added on the purpose of the required ophthalmic examination
2.11.2.8(c)	10/2024	Note added on requirements for applicants that needs near correction
2.11.2.8(c)	10/2024	Note added on steps an applicant must take whenever there is a requirement to obtain or renew correcting
2.11.2.8(c)	10/2024	Note added on the effect of defective stereopsis, abnormal convergence not interfering with near vision on the medical assessment
2.11.2.8(c)(7)	10/2024	Removed applicability dates in Notes 3 and 4
2.11.2.8(d)(3)	10/2024	Deleted applicability date

Location	Date	Description
IS 2.2.1.7	10/2024	Deleted the IS and moved text to 2.2.1.7
IS 2.2.2(a)(1)(b)(c)(4)(v)(5)(v)	10/2024	Minor edits, term "may' and 'is' inserted
IS2.2.3.1	10/2024	Reserved
IS 2.2.3.1(b)(1)	10/2024	Changed knowledge test items
IS 2.2.3.1(d)	10/2024	Edited to remove gender-specific pronouns
IS 2.2.4.3(a)	10/2024	"should" replaced "will" and additional minor grammatical edits.
IS 2.2.4.3(b)	10/2024	Minor grammatical edits
IS 2.2.4.3 (c)	10/2024	Added text
IS2.2.4.4(b)	10/2024	Minor grammatical changes will replace should and other small grammatical changes
IS2.2.4.4(c)	10/2024	Minor grammatical changes for clarity and conciseness
IS2.2.4.4(c)(1)	10/2024	Minor edits caps removed
IS2.2.4.4(d)(1)	10/2024	The term "test" added
IS2.2.4.4(d)(2)	10/2024	Minor edits and grammatical changes
IS2.2.4.4(f)	10/2024	The term "Contracting" added
IS 2.2.4.9	10/2024	Spelled out AMT in title
IS2.2.4.9(a)	10/2024	Term "will" replace "should" and other minor edits
IS2.2.4.9(b)	10/2024	Minor grammatical changes for clarity and conciseness
IS2.2.4.9(c)	10/2024	Phrase "between Sint Maarten and the other" added and other minor edits
IS 2.2.4.10	10/2024	Spelled out AMT in title
IS2.2.4.10(b)	10/2024	Term "will" replace "should" and other grammatical changes
IS 2.2.4.10 (c)(1)	10/2024	Added text
IS 2.2.4.11	10/2024	Reserved not applicable for Sint Maarten
IS 2.2.8 (IX)	10/2024	Editorial to correct numbering
IS 2.2.8	10/2024	Added A to IS number and moved note
IS 2.2.8	10/2024	Changed the numbering of the license in (a) to Roman numerals to match the ICAO Annex; numbering editorial to renumber date of birth as (IVa)
IS 2.2.8 B	10/2024	Section added regarding specifications and format for electronic licenses
IS 2.3.1.7(b)(3) and (c)(5)(i)	10/2024	Changed "synthetic flight training" to "flight simulation training device"
IS 2.3.2.5(a)(b)(1)(2)(c)(1)(2)(d)(e)(1)(i)(ii)(2)(i)(ii)(A)(B)(3)(i)(ii)(ii)(iv)(A)(B)(4)(f)(1)(ii)(ii)(ix)(x)(xi)(2)(i)(B)(ii)(v)(vi)	10/2024	Minor edits and grammatical changes
IS2.3.2.5 (2)(i)(B)(vii)	10/2024	Term "an" added to correct sentence structure

Location	Date	Description
IS2.3.2.5(g)(3)(i)(ii)(4)(i)(ii)(A)(5)(ii)(iii)(iv) (B)(6)(ii)(iii)(ix)(x)(xi)(7)(B)	10/2024	Minor edits and grammatical changes
IS2.3.2.5(7)(B)(vi)	10/2024	Minor edits and grammatical changes
IS2.3.2.5(7)(B)(vii)D	10/2024	Minor edits and grammatical changes
IS.2.3.2.5(8)	10/2024	Term "an" added to correct sentence structure
IS 2.3.3	10/2024	RESERVED
IS 2.3.3.2	10/2024	RESERVED
IS 2.3.3.3	10/2024	RESERVED
IS 2.3.3.4	10/2024	RESERVED
IS 2.3.3.5	10/2024	RESERVED
IS 2.3.3.6	10/2024	RESERVED
IS 2.3.3.6	10/2024	RESERVED
IS 2.3.4.4	10/2024	RESERVED
IS 2.3.4.5	10/2024	RESERVED
IS 2.3.4.6	10/2024	RESERVED
IS 2.3.4.7	10/2024	RESERVED
IS 2.3.5	10/2024	Updated IS numbering to match changes in MCAR
IS.2.3.5.6	10/2024	RESERVED
IS 2.3.5.7	10/2024	RESERVED
IS 2.3.6	10/2024	Updated IS numbering to match changes in MCAR
IS 2.3.7	10/2024	Updated IS numbering to match changes in MCAR
IS 2.3.4 through IS 2.10.1.6	10/2024	Deleted. Removed skill test requirements from the IS to refer to individual CAA skill test standard (separate skill test documents to be issued by the CAA)
IS 2.3.8.2	10/2024	IR "instrument rating" acronym spelled out
IS 2.3.9.2(a)(1)(v)(b)(v)	10/2024	FI "flight instructor" acronym spelled out throughout the paragraph
IS.2.3.9.2(4)	10/2024	Minor edit
IS.2.3.10.1(a)	10/2024	FSTD acronym used in place of the term 'flight simulation training device"
IS 2.6.1.4	10/2024	AMT application form included
IS 2.8.3.2	10/2024	the term "flight dispatcher" replaced by FOO
IS 2.10.1.4	10/2024	RESERVED
IS 2.10.1.5	10/2024	RESERVED
IS 2.10.1.6	10/2024	RESERVED
IS 2.11.1.3	10/2024	Term "AME" replaces 'CAME" throughout paragraph
IS 2.11.1.8	10/2024	Deleted initial medical examination form; added to requirements for medical certificate

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### INTRODUCTION

Part 2 of the Sint Maarten Model Civil Aviation Regulations (SMCARs) addresses the licensing of aviation personnel. Article 32 of the International Civil Aviation Organization (ICAO) Convention on International Civil Aviation (Chicago Convention) requires Sint Maarten to issue licenses and certificates of competency, or to validate such licenses or certificates issued by other Contracting States, to the pilot of every aircraft and to other members of the flight crew of every aircraft engaged in international navigation. The basis of this obligation is the goal of promoting and conducting safe and regular aircraft operations through the development and implementation of internationally acceptable certification and licensing processes. If the same processes are extended to domestic operations, Sint Maarten can ensure the overall safety of aircraft operation through unification of licensing requirements. ICAO Annex 1, *Personnel Licensing*, presents the broad international specifications for personnel licensing agreed upon by Contracting States.

Most of the Standards in ICAO Annex 1 do not provide enough detail to satisfy the day-to-day management of a State's personnel licensing activities. This part of the SMCARs presents detailed requirements for the general rules of licensing, and for certification of the licenses contained in ICAO Annex 1, of pilots, flight instructors (FIs), flight operations officers (FOOs), mechanics, air traffic controllers, and aeronautical station operators, and for the medical assessment of flight crew and aeronautical station operators. This part also addresses licenses not addressed in ICAO Annex 1, such as, inspection authorizations (IAs), aviation repair specialists (ARS), and designees. The licensing and medical requirements of this part are based upon ICAO Annex 1, through Amendment 178; Annex 2, *Rules of the Air*, Amendment 47; Annex 6, Part I, *International Commercial Air Transport – Aeroplanes*, Amendment 48; Annex 6, Part III, *International Operations – Helicopters*, Amendment 92; Title 14 of the United States (U.S.) Code of Federal Regulations (14 CFR); and the Joint Aviation Requirements – Flight Crew Licensing (JAR-FCL).

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### Part 2—Personnel Licensing

### 2.1 GENERAL

#### 2.1.1.1 APPLICABILITY

- (a) This part prescribes the:
  - (1) The requirements for issuing renewal and re-issue of aviation personnel licenses, ratings, authorizations, endorsements, certificates and designations;
  - (2) The conditions under which those licenses, ratings, authorizations, endorsements, certificates, and designations are necessary; and
  - (3) The privileges and limitations granted to the holders of those licenses, ratings, authorizations, certificates, and designations.

#### 2.1.1.2 DEFINITIONS

(a) Definitions are contained in Part 1 of these regulations.

#### 2.1.1.3 ABBREVIATIONS

- (a) The following abbreviations are used in this part:
  - (1) **AFIS** Aerodrome Flight Information Service
  - (2) AFISO-Aerodrome Flight Information Service Officer
  - (3) AGI advanced ground instructor
  - (4) AIP Aeronautical Information Publication
  - (5) **AME** aviation medical examiner
  - (6) **AMO** approved maintenance organization
  - (7) **AMT** aviation maintenance technician
  - (8) **ARS** aviation repair specialist
  - (9) **AS** airship
  - (10) ASO aeronautical station operator
  - (11) ATCO air traffic controller (Note: Abbreviation ICAO A446)
  - (12) ATO approved training organization
  - (13) **ATPE –** airline transport pilot examiner
  - (14) **ATPL –** airline transport pilot license
  - (15) **ATS** air traffic service
  - (16) **BGI** basic ground instructor
  - (17) **C2** command and control
  - (18) CAT II Category II
  - (19) **CAT III** Category III
  - (20) **CE** commercial pilot examiner
  - (21) CIE International Commission on Illumination
  - (22) **CIRE** commercial instrument rating examiner
  - (23) **CP** co-pilot

- (24) CPL commercial pilot license
- (25) CRM crew resource management
- (26) **DCA** Director of Civil Aviation
- (27) **DH** decision height
- (28) **DPE –** designated pilot examiner
- (29) FOO flight operations officer
- (30) **FSTD** flight simulation training device
- (31) **GI** ground instructor
- (32) HIV human immunodeficiency virus
- (33) IA inspection authorization
- (34) ICAO International Civil Aviation Organization
- (35) **IFR** instrument flight rules
- (36) IGI instrument ground instructor
- (37) ILS instrument landing system
- (38) IMC instrument meteorological conditions
- (39) **IR** instrument rating
- (40) **IS** Implementing Standard
- (41) ISO International Organization for Standardization
- (42) MCM Maintenance Control Manual
- (43) **MEL –** minimum equipment list
- (44) MPA multi-pilot aeroplane
- (45) **MPH –** multi-pilot helicopter
- (46) MPL multi-crew pilot license
- (47) MSL mean sea level
- (48) **NDT –** non-destructive testing
- (49) **NOTAM –** Notice to Airmen
- (50) **PIC** pilot-in-command
- (51) **PL –** powered-lift
- (52) **PPE –** private pilot examiner
- (53) **PPL** private pilot license
- (54) **RT –** radiotelephony
- (55) **RVR** runway visual range
- (56) **SOP** standard operating procedure
- (57) **SPA** single-pilot aeroplane
- (58) **SPH –** single-pilot helicopter
- (59) **SSP** State safety programme
- (60) STS skill test standard
- (61) **VFR** visual flight rules

#### (62) VMC – visual meteorological condition

### 2.2 GENERAL REQUIREMENTS FOR LICENSES, RATINGS, AUTHORIZATIONS, ENDORSEMENTS, CERTIFICATES, AND DESIGNATIONS

### 2.2.1 ISSUE, RENEWAL, AND RE-ISSUE OF LICENSES, RATINGS, AUTHORIZATIONS, ENDORSEMENTS, CERTIFICATES, AND DESIGNATIONS

#### 2.2.1.1 LICENSES

- (a) The Authority may issue the following licenses under this Part to an applicant who satisfactorily accomplishes the requirements of this Part for the license sought:
  - (1) Pilot license:
    - (i) PPL aeroplane, helicopter, or powered-lift categories;
    - (ii) CPL—aeroplane, helicopter,
    - (iii) ATPL aeroplane, helicopter;
  - (2) AMT license.
  - (3) ATCO license
  - (4) AFISO license

#### 2.2.1.2 RATINGS

- (a) The Authority may issue the following ratings to place on a pilot license or FI license when an applicant satisfactorily accomplishes the requirements of this Part for the rating sought:
  - (1) Category ratings in the following aircraft:
    - (i) Aeroplane.
    - (ii) Helicopter.
  - (2) Class ratings in the following aircraft:
    - (i) Single-engine land aeroplane.
    - (ii) Multi-engine land aeroplane.

Note: A class rating may be issued for those helicopters certificated for single-pilot operations and which have comparable handling, performance and other characteristics.

(iii) Any rating considered necessary by the Authority.

Note: A class rating or endorsement for High Performance Aeroplanes (HPA) requires additional knowledge, if the applicant has not completed the ATPL (A) knowledge requirements.

- (3) Type ratings in the following aircraft:
  - (i) Each type of aircraft certificated for operation with a minimum crew of at least two pilots.
  - (ii) Each type of helicopter certificated for single-pilot operation except where a class rating has been established under paragraph 2.2.1.2(a)(2)(v) of this subsection.
  - (iii) Any aircraft considered necessary by the Authority

Note: A type rating for High Performance Aeroplanes (HPA) requires additional knowledge, if the applicant has not completed the ATPL (A) knowledge requirements.

- (4) Instrument ratings in the following aircraft:
  - (i) Instrument Aeroplane.

(ii) Instrument – Helicopter.

Note: The IR is included in the ATPL-Aeroplane and .

- (5) FI ratings:
  - (i) The appropriate aircraft category, class, instrument and/or type rating according to the instruction to be taught.
- (b) The Authority may issue the following ratings to place on a GI license when an applicant satisfactorily accomplishes the requirements of this Part for the rating sought:
  - (1) Basic.
  - (2) Advanced.
  - (3) Instrument.
- (c) The Authority may issue the following ratings to place on an FE license when an applicant satisfactorily accomplishes the requirements of this Part for the rating sought:
  - (1) Reciprocating engine powered.
  - (2) Turbopropeller powered.
  - (3) Turbojet powered.
- (d) The Authority may issue the following ratings to place on an ATCO license when an applicant satisfactorily accomplishes the requirements of this Part for the rating sought:
  - (1) Aerodrome control rating.
  - (2) Approach control rating.
  - (3) Approach radar control rating.
  - (4) Approach precision radar control rating.
  - (5) Area control rating.
  - (6) Area radar control rating.
- (e) The Authority may issue the following license categories to place on an AMT license when an applicant satisfactorily accomplishes the requirements of this Part for the rating sought:
  - (1) Airframe
  - (2) Powerplant
  - (3) Avionics

#### 2.2.1.3 AUTHORIZATIONS

- (a) The Authority may issue the following authorizations when an applicant satisfactorily accomplishes the requirements of this Part for the authorization sought:
  - (1) Student pilot authorization.
  - (2) IA for training in a FSTD.

Note: If the State prefers, a student pilot license or certificate may be issued.

- (b) The Authority may issue the following authorizations to place on a pilot license when an applicant satisfactorily accomplishes the requirements of this part for the authorization sought:
  - (1) CAT II pilot authorization.
  - (2) CAT III pilot authorization.
- (c) The Authority may issue the following authorization to place on an AMT license when an applicant satisfactorily accomplished the requirements of this part for the authorization sought:
  - (1) IA.

#### 2.2.1.4 CERTIFICATES

- (a) The Authority may issue the following medical certificates when an applicant satisfactorily accomplishes the requirements of this Part for the medical certificate sought:
  - (1) Medical certificate, Class 1, for CPL, ATPL, and DPE
  - (2) Medical certificate Class 2 for student pilot authorization, PPL;
  - (3) Medical certificate Class 3, for ATCO, AFISO and AMT license
- (b) The Authority may issue validation certificates to pilots and holding a license from another Contracting State.
- (c) The Authority may issue certificates of designation to representatives of the DCA as identified in 2.2.1.6 of this part.

#### 2.2.1.5 ENDORSEMENTS

- (a) An authorized instructor may issue the following endorsements to a pilot who satisfactorily accomplishes the required training in this part:
  - (1) Complex aeroplane endorsement
  - (2) High-performance aeroplane endorsement
  - (3) High-altitude aircraft endorsement

#### 2.2.1.6 DESIGNATION OF REPRESENTATIVES OF THE DIRECTOR OF CIVIL AVIATION

- (a) The Authority may issue the following designations to private persons to act on behalf of the DCA, as specified in this Part:
  - (1) DPE;
  - (2) AME; or
  - (3) Other designees as may be determined by the Authority.

#### 2.2.1.7 VALIDITY OF LICENSES, RATINGS, AUTHORIZATIONS, CERTIFICATES, AND DESIGNATIONS

- (a) The validity period of the licenses, ratings, authorizations, designations, certificates of validation and medical certificates and the renewal or reissue conditions are indicated in the applicable requirements of this part.
- (b) The issue, renewal and re-issue of licenses, ratings, authorizations, designations and certificates will be performed by the Authority.
  - (1) Renewal of ratings and CAT II or III pilot authorizations may be performed by the Examiner, when delegated by the Authority.
  - (2) Renewal of medical certificates may be performed by the AME, when delegated by Authority.
- (c) Application for the issue, renewal and re-issue of licenses, ratings, authorizations, designations and certificates by the Authority shall be done by submitting to the Authority a properly completed form, which can be obtained from the Authority.
- (d) FOR RENEWAL,
  - (1) Application shall be made to the Authority at least 14 days before the expiry date.
  - (2) The license, rating, authorization, designation, or certificate, including any required medical certificate, shall be valid.
- (e) PRIVILEGES.
  - (1) The holder of a license, rating, certificate, authorization or designation shall not exercise privileges other than those granted by the license, certificate, authorization or designation.

- (2) The privileges granted by a license, or by related ratings, may not be exercised unless the holder maintains competency and meets the requirements of this part for recent experience.
- (f) MAINTENANCE OF COMPETENCY
  - (1) Maintenance of competency shall be indicated in the flight crew members personal license or record (e.g. logbook).
  - (2) The maintenance of competency of flight crewmembers, engaged in commercial air transport operations, shall be satisfactorily established by demonstration of skill during proficiency flight checks completed in accordance with Part 8 of these regulations.
  - (3) The maintenance of competency shall be satisfactorily recorded in the operator's records or in the flight crewmember's personal logbook or license.
  - (4) A flight crew or remote flight crew member shall, to the extent deemed feasible by the State of Registry, demonstrate his or her continuing competency in FSTDs approved by that State.
- (g) A flight crewmember shall, to the extent deemed feasible by the State of Registry, or by the Authority of the State of the Operator, respectively, demonstrate his or her continuing competency in FSTDs approved by that State.
- (h) MEDICAL FITNESS. An applicant for the following licenses, authorizations, and designations shall hold a current and appropriate medical certificate issued under the requirements of this part in order for that applicant's license, authorization, or designation to be valid:
  - (1) Pilot license,
  - (2) DPE.
  - (3) ATCO license
  - (4) AFISO License.
  - (5) AMT license

#### 2.2.2 LANGUAGE PROFICIENCY

- (a) Pilots, ATCOs, and ASOs, and hall demonstrate the ability to speak and understand RT communications in the English language.
- (b) The airmen identified in paragraph 2.2.2 (a) of this subsection shall demonstrate the ability to speak and understand RT communication in the English language to least the Operational Level (Level 4) with the aim to speak at the Expert Level (Level 6) as specified in the language proficiency requirements in IS 2.2.2.
- (c) The language proficiency of the airmen identified in paragraph 2.2.2 (a) of this subsection shall be formally evaluated at intervals in accordance with an individual's demonstrated proficiency level as follows:
  - (1) Those demonstrating language proficiency at the Operational Level (Level 4) shall be evaluated at intervals not greater than 3 years;
  - (2) Those demonstrating language proficiency at the Extended Level (Level 5) shall be evaluated at intervals not greater than 6 years; and
  - (3) Those demonstrating language proficiency at the Expert Level (Level 6) shall be exempt from further language evaluation.
- (d) Detailed requirements for language proficiency are contained in IS 2.2.2.

#### 2.2.3 RESERVED

## 2.2.4 VALIDATION AND CONVERSION OF FOREIGN LICENSES, RATINGS, AUTHORIZATIONS AND CERTIFICATES

#### 2.2.4.1 VALIDATION OF FLIGHTCREW LICENSES

- (a) GENERAL REQUIREMENTS FOR VALIDATION.
  - (1) A person who holds a current and valid pilot license issued by another Contracting State in accordance with ICAO Annex 1 may apply for a validation of such license for use on aircraft registered in Sint Maarten.
  - (2) The applicant for the validation certificate shall present to the Authority the foreign license and the record (e.g. logbook) of evidence of required experience.
  - (3) The applicant for the validation certificate shall present to the Authority evidence that the applicant holds a current medical certificate issued by the Contracting State that issued the applicant's license.
    - (i) The Authority may allow the applicant to use the foreign medical certificate with the validation certificate provided that the medical certification requirements on which the foreign medical certificate was issued meet the requirements of this part, relevant to the license held.
  - (4) The applicant for the validation certificate shall present to the Authority evidence of language proficiency in the English language as specified in 2.2.2 of this part or shall demonstrate to the Authority the language proficiency skills as specified in 2.2.2 of this part.
    - (i) The validation shall be limited for use on Sint Maarten registered aircraft for use within Sint Maarten if the pilot is not proficient in the English language, as required by 2.2.2 of this part.
  - (5) The Authority will verify the authenticity of the license, ratings authorizations and the medical certificate with the State of License issue prior to issuing the validation.
  - (6) The Authority will only validate ratings or authorizations on the foreign license together with the validation of a license
  - (7) The Authority may issue a validation certificate which will be valid for one year, provided the foreign license, ratings or authorizations and the medical certificate remains valid.
- (b) VALIDATION CERTIFICATE WITH PPL PRIVILEGES. In addition to the requirements of paragraph 2.2.24.1(a) of this subsection, the applicant for a validation certificate with PPL privileges shall have a foreign license with at least PPL privileges.
- (c) VALIDATION CERTIFICATE WITH PPL/IR, CPL, CPL/IR, MPL, ATPL, OR FE PRIVILEGES. In addition to the requirements in paragraph 2.2.4.1(a) of this subsection, the applicant for a validation certificate with PPL/IR, CPL, CPL/IR, MPL, ATPL, or FE privileges shall have a foreign license with at least those privileges and shall meet the following requirements:
  - (1) The applicant for the validation certificate shall demonstrate, to the satisfaction of the Authority and relevant to the license to be validated, knowledge of Sint Maarten's:
    - (i) Air Law;
  - (2) The applicant for the validation certificate shall complete a skill test for the relevant license and ratings that the applicant wants to be validated relevant to the privileges of the license held; and
  - (3) The applicant shall comply with the experience requirements set out in the table below:

License	Experience	Validation Privileges
ATPL(A)	> 1 500 hours operating in commercial air transport and minimum 500hours as PIC in multi-pilot * certificated aeroplanes	Commercial air transport in MPAs as PIC
ATPL(H)	>1 000 hours as PIC on in MPHs	Commercial air transport in MPHs as PIC
ATPL(A) or CPL(A)/IR	> 500 hours as PIC on multi engine aerplanes certificated for single pilot operation	Commercial air transport in multi engine aeroplanes as PIC
ATPL(H) or CPL(H)/IR	> 500 hours as PIC or CP in MPHs	Commercial air transport in MPHs as CP
CPL(A)/IR	> 1 000 hours as PIC in commercial air transport since gaining an IR	Commercial air transport in SPAs as PIC
CPL(H)/IR	> 1 000 hours as PIC in commercial air transport since gaining an IR	Commercial air transport in SPHs as PIC
CPL(A)	> 700 hours in aeroplanes other than gliders, including 200 hours in the activity role for which validation is sought, and 50 hours in that role in the last 12 months	Activities in aeroplanes other than commercial air transport
CPL(H)	> 700 hours in helicopters including 200 hours in the activity role for which validation is sought, and 50 hours in that role in the last 12 months	Activities in helicopters other than commercial air transport
MPL(A)		Commercial air transport in turbine - powered air transport aeroplanes certificated for operations with a minimum crew of at least two pilots as CP
PPL(A)/IR	> 100 hours PIC instrument flight time	Private flights under IFR
PPL(H)/IR	> 100 hours PIC instrument flight time	>250 hours as check pilot of turbine- powered air transport aeroplanes certificated for operations with a minimum crew of at least two pilots operated in commercial air transport within the past 12 months
PPL(PL)/IR	> 100 hours PIC instrument flight time	Private flights under IFR

\*Note: The term "multi-pilot" is used to indicate experience in an aircraft required to be operated with a CP. (For example: See ICAO Annex 1: 2.6.1.3.1.)

#### 2.2.4.2 CONVERSION OF FLIGHTCREW LICENSES

- (a) Conversion of a foreign pilot license for issuance of a PPL by Sint Maarten.
  - (1) The holder of a current and valid pilot license with at least PPL privileges, issued by another Contracting State in accordance with ICAO Annex 1, may apply for a conversion and be issued a PPL for use on aircraft registered in Sint Maarten, provided the following requirements are met.
  - (2) The holder shall:
    - (i) Present to the Authority the foreign license, the evidence of experience required by presenting the record (e.g. logbook), and a current medical certificate;

- (ii) Present to the Authority evidence of language proficiency in the language of Sint Maarten and in English as specified in 2.2.2 of this part, or shall demonstrate to the Authority the language proficiency skills as specified in 2.2.2 of this part;
- (iii) Obtain a Class 2 medical certificate issued under this part;
- (iv) Demonstrate, to the satisfaction of the Authority and relevant to the license to be converted, knowledge of Sint Maarten's:
  - A) Air Law;
- (v) Complete a PPL skill test.
- (3) The Authority will verify the authenticity of the license, ratings, authorizations and the medical certificate with the state of license issue prior to converting the license.
- (b) Conversion of PPLs/IR, CPLs, CPLs/IR, ATPLs, licenses, which have been validated in accordance with 2.2.4.1 of this part.
  - (1) The holder of a current and valid foreign CPL, CPL/IR, ATPL or license issued by another Contracting State in accordance with ICAO Annex 1, and an appropriate medical certificate, may apply for conversion to the appropriate license and ratings issued by Sint Maarten, provided the following requirements are met:
    - (i) The applicant is the holder of a current validation certificate issued under 2.2.4.1 of this part;
    - The applicant has completed 200 flight hours in a Sint Maarten registered aircraft which is operated by an operator established in Sint Maarten exercising the privileges granted by the validation certificate;
    - (iii) The applicant for the conversion shall present to the Authority the foreign license and evidence of the 200 flight hours by presenting the record (e.g. logbook); and
    - (iv) The applicant shall hold or obtain a medical certificate issued under this Part, appropriate to the level of license to be converted;
  - (2) The holder of a current and valid foreign PPL/IR issued by another Contracting State in accordance with ICAO Annex 1, and an appropriate medical certificate, may apply for conversion to the appropriate license and ratings issued by Sint Maarten, provided the following requirements are met:
    - (i) The applicant is the holder of a current validation certificate issued under 2.2.4.1 of this part;
    - (ii) The applicant has completed 100 flight hours in a Sint Maarten registered aircraft in Sint Maarten exercising the privileges granted by the validation certificate,
    - (iii) The applicant for the conversion shall present to the Authority the foreign license and evidence of the 100 flight hours by presenting the record (e.g. logbook); and
    - (iv) The applicant shall hold or obtain a medical certificate issued under this Part, appropriate to the level of license to be converted.
  - (3) Ratings listed on a person's foreign pilot license that have been validated in accordance with 2.2.4.1 of this part may be placed on that person's converted license.

# 2.2.4.3 VALIDATION OF FLIGHTCREW LICENSES BY RELIANCE UPON THE LICENSING SYSTEM OF ANOTHER CONTRACTING STATE

- (a) Notwithstanding 2.2.4.1 and 2.2.4.2 of his part, the Authority may issue a validation certificate with the applicable ratings to the holder of a current and valid foreign license and current medical certificate, provided:
  - (1) The license is issued by another ICAO Contracting State;
  - (2) The Authority is convinced that the license has been issued on the basis of at least this part;

- (3) There is an agreement between the Authority and the other Contracting State about recognition of licenses and, if applicable, about keeping the licenses and ratings current and valid; and
- (4) The applicant for the validation certificate shall demonstrate, to the satisfaction of the Authority and relevant to the license, knowledge of Sint Maarten's:
  - (i) Air law;
- (b) The applicant for the validation certificate shall present to the Authority the:
  - (1) Foreign license and evidence of the currency of the license by presenting the record (e.g. logbook).
  - (2) Medical certificate relevant to the license to be validated, provided that the foreign medical certificate meets the requirements of this part; and
  - (3) Evidence of language proficiency in English as specified in 2.2.2 of this part or shall demonstrate to the Authority the language skills as specified in 2.2.2 of this part.
- (c) The Authority will verify the authenticity of the license, ratings, authorizations, and medical certificate with the State of License issue prior to issuing the validation.
- (d) The Authority may issue a validation certificate which will be valid for one year, provided the foreign license, ratings, authorizations and medical certificate remains valid.
- (e) Procedures for the validation of flightcrew licenses by reliance upon the licensing system of another Contracting State are contained in IS 2.2.4.3.

## 2.2.4.4 CONVERSION OF FLIGHTCREW LICENSES BY RELIANCE UPON THE LICENSING SYSTEM OF ANOTHER CONTRACTING STATE

- (a) Notwithstanding 2.2.4.1 and 2.2.4.2 of this part, the Authority may issue a license with the applicable ratings to the holder of a current and valid foreign license, provided:
  - (1) The license is issued by another ICAO Contracting State;
  - (2) the Authority is convinced that the license has been issued on the basis of at least this part ; and
  - (3) there is an agreement between the Authority and the other Contracting State about recognition of licenses.

### Note 1: The registry of agreements with their associated list of Contracting States can be found in ICAO's Database of Aeronautical Agreements and Arrangements.

Note 2: Common licensing regulations refer to a common licensing regulatory framework that is legally binding and directly applicable to Contracting States party to the agreement, recognizing the automatic validation process. Common licensing regulations used by those States contain identical requirements for license issuance, maintenance of competency, and recent experience. A regional aviation safety body can develop and maintain these common regulations for its Contracting States

- (b) The applicant for the conversion shall present to the Authority the:
  - foreign license and evidence of the currency of the license by presenting the record (e.g. logbook);
  - (2) medical certificate relevant to the license if the medical certificate is to be converted or medical certificate issued under this part 2 relevant to the license sought; and
  - (3) Evidence of language proficiency in English as specified in 2.2.2 of this part or shall demonstrate to the Authority the language skills as specified in 2.2.2 of this part.
- (c) The applicant shall demonstrate, to the satisfaction of the Authority and relevant to the license to be converted, knowledge of Sint Maarten's:
  - (1) Air law;

- (d) The Authority will verify the authenticity of the license, ratings, authorizations, and medical certificate with the State of License issue prior to issuing the license.
- (e) Procedures for the conversion of flightcrew licenses by reliance upon the licensing system of another Contracting State are contained in IS 2.2.4.4.

#### 2.2.4.5 VALIDATION IN CASE OF LEASED, CHARTERED OR INTERCHANGED AIRCRAFT

- (a) The requirements stated in 2.2.4.1 of this part shall not apply where aircraft registered in Sint Maarten are leased to, chartered by or interchanged by an operator of another Contracting State, provided that during the term of the lease the State of the Operator has accepted the responsibility for the technical and/or operational supervision of the aircraft in accordance with Art. 83 bis of the Convention on International Civil Aviation.
- (b) The licenses of the flightcrew of the other Contracting State may be validated by the authority, provided that the privileges of the flightcrew license validation are restricted for use during the lease, charter or interchange period only on nominated aircraft in specified operations not involving a Sint Maarten operator, directly or indirectly through a wet lease or other commercial arrangement.
- (c) The Authority will verify the authenticity of the license, ratings, authorizations, including the English language proficiency endorsement of at least Level 4, and the medical certificate, with the State of License issue prior to issuing the validation.

#### 2.2.4.6 RESERVED

#### 2.2.4.7 VALIDATION OF AIRCRAFT MAINTENANCE TECHNICIAN LICENSES

- (a) GENERAL REQUIREMENTS FOR VALIDATION.
  - (1) A person who holds a current and valid AMT license issued by another Contracting State in accordance with ICAO Annex 1, may apply for the validation of such license for use on aircraft registered in Sint Maarten provided the following requirements are met.
  - (i) The applicant for the validation certificate shall present to the Authority the foreign license and evidence of the experience required by presenting the personal record (e.g. logbook).
  - (ii) The applicant for the validation certificate shall demonstrate to the Authority evidence of language proficiency in English.
  - (2) The Authority will verify the authenticity of the license, ratings and authorizations with the State of License Issue prior to issuing the validation.
  - (3) The Authority will only validate ratings or authorizations on the foreign license together with the validation of a license
  - (4) The Authority may issue a validation certificate which shall be valid for 1 year, provided the foreign license, ratings or authorizations remains valid.
- (b) The applicant for the validation certificate shall demonstrate to the satisfaction of the Authority and relevant to the license to be validated, knowledge of:
  - (1) Air Law;
  - (2) Applicable Airworthiness requirements governing certification and continuing airworthiness; and
  - (3) AMOs and procedures.
- (c) The applicant for the validation certificate shall complete a skill test for the relevant license and ratings that the applicant wants to have validated, relevant to the privileges of the license held.
- (d) The applicant for the validation certificate shall have a minimum of 2 years of AMT experience.

#### 2.2.4.8 RESERVED

## 2.2.4.9 VALIDATION OF AIRCRAFT MAINTENANCE TECHNICIAN LICENSES BY RELIANCE UPON THE LICENSING SYSTEM OF ANOTHER CONTRACTING STATE

- (a) Notwithstanding 2.2.4.7 and 2.2.4.8 of this part, the Authority may issue a validation certificate with the applicable ratings to the holder of a current and valid foreign AMT, provided:
  - (1) The license is issued by another Contracting State;
  - (2) the Authority has determined that the license has been issued on the basis of at least this part;
  - (3) There is an agreement between the Authority and the other Contracting State about recognition of licenses and, if applicable, about keeping the licenses and ratings current and valid; and
  - (4) The applicant for the validation certificate demonstrates, to the satisfaction of the Authority and relevant to the license to be validated, knowledge of Sint Maarten's:
    - (i) Air law;
    - (ii) Applicable airworthiness requirements governing certification and continuing airworthiness; and
    - (iii) AMOs and procedures.
  - (5) The applicant for the validation certificate shall present to the Authority the:
    - (i) Foreign license and evidence of the currency of the license by presenting the personal record (e.g., logbook); and.
  - (6) The applicant for the validation shall demonstrate to the Authority evidence of language proficiency in the language of Sint Maarten and, if required, in English.
- (b) The authority will verify the authenticity of the license, ratings, with the State of License issue prior to issuing the validation.
- (c) The Authority may issue a validation certificate which shall be valid for 1 year, provided the foreign license, ratings, and authorizations remain valid.
- (d) Procedures for the validation of AMT licenses by reliance upon the licensing system of another Contracting State are contained in IS 2.2.4.9.

#### 2.2.4.10 RESERVED

#### 2.2.4.11 RESERVED

#### 2.2.5 TRAINING AND TESTING REQUIREMENTS

#### 2.2.5.1 DOCUMENTATION OF TRAINING AND AERONAUTICAL EXPERIENCE

- (a) Each person shall document and record the following in a manner acceptable to the Authority:
  - (1) The training and/or experience used to meet the requirements for a license, rating, endorsement and/or authorization of this part; and
  - (2) The experience required to show maintenance of recency of aeronautical experience according to the requirements of this part.

#### 2.2.5.2 TRAINING CONDUCTED IN AN ATO

(a) Approved training for aviation personnel licenses shall be conducted within an ATO.

- (b) The Authority may approve a training programme for a license, rating, authorization or endorsement that allows an alternative means of compliance with the experience requirements prescribed in this Part when training is conducted within an ATO under special curricula approved by the Authority under Part 3 of these regulations.
- (c) Prior to authorizing an alternative means of compliance that permits an ATO to conduct training, that does not meet the normal prescribed experience requirements, the Authority will ensure that the approved training programme provides a level of competency at least equal to that provided by the minimum experience requirements for personnel not receiving such approved special curricula.
- (d) Part 3 of these regulations prescribes the requirements for certifying and administering ATOs for conducting approved training.
- (e) Competency-based approved training for aircraft maintenance personnel shall be conducted within an ATO.
- (f) competency-based approved training for maintenance personnel shall be conducted within an ATO.
- (g) Competency-based approved training for flight operations officer/flight dispatcher personnel shall be conducted within an ATO.
- (h) Procedures supporting the development of competency-based training and assessment for aeroplane flight crew, air traffic controllers, aircraft maintenance personnel, remote flight crew, and flight operations officers'/flight dispatchers, including ICAO competency frameworks, are contained in ICAO Doc 9868, Procedures for Air Navigation Services – Training (PANS-TRG). ICAO Doc 10098, Manual on Training of Aircraft Maintenance Personnel, contains guidance material on the design and development of an aircraft maintenance personnel training programme.

#### 2.2.5.3 USE OF FLIGHT SIMULATION TRAINING DEVICES

- (a) Except as specified in paragraph 2.2.5.3(b) of this subsection, no airman may receive credit for use of any FSTD for satisfying any training, testing, or checking requirement of this part unless that flight simulator or flight training device is approved by the Authority for:
  - (1) The training, testing, and checking for which it is used;
  - (2) Each particular manoeuvre, procedure, or crewmember function performed; and
  - (3) The representation of the specific category and class of aircraft, type of aircraft, particular variation within the type of aircraft, or set of aircraft for certain flight training devices.
- (b) The FSTD shall have the same technology for the basic flight instruments (attitude indicator, airspeed, altimeter and heading reference) as those of the aircraft used by the operator.
- (c) Operators that have electronic/glass displays shall use simulators that have electronic/glass displays.
- (d) Operators that have standard instruments shall use simulators that have standard instruments.
- (e) Operators shall not conduct differences training or variant training on aircraft that have electronic glass displays with aircraft that have standard instruments.
- (f) The Authority may approve a device other than an FSTD for specific purposes.
- (g) The use of an FSTD for performing training, testing and checking for which a flight crewmember is to receive credit, shall be approved by the Authority, which will ensure that the FSTD is appropriate to the task.

### 2.2.5.4 KNOWLEDGE AND SKILL TESTS AND CHECKS: TIME, PLACE, DESIGNATED PERSONS AND FORMAT

- (a) Knowledge and Skill Tests and Checks prescribed by or under this part shall be given at times, at places, and by persons authorized and designated by the Authority.
- (b) The knowledge test shall be performed in written or computer format, except for the knowledge test for an instructor license or an additional instructor rating within the same aircraft category, which may be performed orally.

(c) In addition to the written knowledge test, candidates may be questioned orally during the skill test, as appropriate.

## 2.2.5.5 KNOWLEDGE AND SKILL TESTS AND CHECKS—PREREQUISITES, PASSING GRADES AND RETESTING AFTER FAILURE

(a) An applicant for a knowledge test or a skill test shall have received any required endorsement as specified in this Part for the applicable license, rating or authorization to show that the applicant has met the training and/or experience requirements to take the knowledge or skill test.

Note: The endorsement requirements may differ between licenses and will appear in each license section in this part, as applicable

- (b) An applicant for a knowledge or skill test shall receive written authorization from the Authority to take, or retake, the test.
- (c) An applicant for a knowledge or skill test shall show proper identification at the time of application, in the form of a government issued identification document at the time of application that contains the applicant's:
  - (1) Photograph;
  - (2) Signature;
  - (3) Date of birth, which shows the applicant meets or will meet the age requirements of this part for the license sought before the expiration date of the airman knowledge test report; and
  - (4) Actual residential address, if different from the applicant's mailing address.
- (d) The Authority will specify the minimum passing grades.
- (e) An applicant shall, before attempting the skill test for a license or rating:
  - (1) Have passed the required knowledge test within the 24 calendar-month period preceding the month the applicant successfully completes the skill test; or
  - (2) If an applicant for an ATPL has passed the ATP knowledge test within a period of 7 years before successfully completing the ATP skill test, provided that the applicant is, and has been continuously, employed as a flight crewmember by a certificate holder under Part 9 of these regulations at the time of the ATP skill test.
- (f) When an applicant is required to provide an aircraft for a skill test, the aircraft shall:
  - (1) Be airworthy and certificated;
  - (2) Be capable of performing all areas of operation appropriate to the rating sought and shall have no operating limitations that prohibit its use in any of the areas of operation, required for the skill test
  - (3) Have no operating limitations that prohibit the tasks required for the skill test,
  - (4) Be of national, foreign or military registry of the same category, class, and type if applicable, for the license and/or rating for which the applicant is applying, with an appropriate letter of authorization for aircraft use in a skill test if the applicant is not the owner of the foreign registered or military aircraft;
  - (5) Have:
    - (i) Fully functioning dual controls;
    - (ii) at least two pilot stations with adequate visibility for each person to operate the aircraft safety; and
    - (iii) Flight deck and outside visibility adequate to evaluate the performance of the applicant when an additional jump seat is provided for the examiner.

- (g) If the applicant is required to take a segmented skill test using an FSTD and an aircraft, the FSTD shall be approved by the Authority.
- (h) RETESTING AFTER FAILURE OF A TEST:
  - (1) An applicant for a knowledge or skill test who fails that test may reapply to retake the test only after the applicant has received:
    - (i) The necessary training from an authorized instructor who has determined that the applicant is proficient to pass the test; and
    - (ii) An endorsement from the authorized instructor who gave the applicant the additional training.
  - (2) An applicant for an FI license with an aeroplane category rating, who has failed the skill test due to deficiencies in instructional proficiency on stall awareness, spin entry, spins, or spin recovery shall:
    - Comply with the requirements of paragraph 2.2.5.5(f)(1) of this subsection before being retested;
    - (ii) Bring an aircraft to the retest that is of the appropriate aircraft category for the rating sought and is certificated for spins; and
    - (iii) Demonstrate satisfactory instructional proficiency on stall awareness, spin entry, spins, and spin recovery to an examiner during the retest.

#### 2.2.5.6 RELIANCE ON TRAINING AND TESTING IN ANOTHER CONTRACTING STATE

- (a) The Authority may rely on the training and/or testing system administered by another Contracting State as the basis for its own approved training curriculum, including the administration of written and/or skill test requirements for airman licenses provided that the training facility is an approved ATO by the Contracting State.
- (b) The applicant shall apply for and receive written approval from the Authority prior to receiving training and/or testing in a system administered by another Contracting State.

#### 2.2.6 INSTRUCTOR REQUIREMENTS—GENERAL

- (a) An applicant for an instructor license and ratings or authorizations shall, in addition to specific requirements contained in this Part, have received and logged training from an authorized instructor on the fundamentals of instructing and shall have passed a knowledge test on the following areas of instructing:
  - (1) Techniques of applied instruction;
  - (2) Assessment of student performance in those subjects in which ground instruction is given;
  - (3) The learning process;
  - (4) Elements of effective teaching;
  - (5) Student evaluation and testing, training philosophies;
  - (6) Training programme development;
  - (7) Lesson planning;
  - (8) Classroom instructional techniques;
  - (9) Use of training aids, including FSTDs as appropriate;
  - (10) Analysis and correction of student errors;
  - (11) Human performance relevant to flight instruction;
  - (12) Hazards involved in simulating system failures and malfunctions in the aircraft; and
  - (13) Principles of threat and error management.

- (b) The following applicants do not need to comply with paragraph 2.2.6 (a) of this subsection:
  - (1) The holder of an instructor license or authorization issued under this part who has already passed the knowledge test in the areas of instructing;
  - (2) The holder of a current teacher's certificate issued by a national or local authority that authorizes the person to teach at a secondary educational level or higher; or
  - (3) A person who provides evidence of an equivalent level of experience acceptable to the Authority.

#### 2.2.7 DESIGNATED EXAMINERS

- (a) The Authority may designate private individuals to act as representatives on its behalf in examining, inspecting, and testing persons and aircraft for the purpose of issuing airmen and aircraft licenses, ratings and certificates.
- (b) The specific requirements for each type of designated examiner are contained in the appropriate licensing section of this part related to the licensing requirements of the persons to be examined.
- (c) The Authority will issue each designated examiner a certificate of designated authority and a designee identification card specifying the kinds of designation for which the individual is qualified and the duration of the designation.

#### 2.2.8 SPECIFICATIONS AND FORMAT OF THE LICENSE

- (a) The license shall be issued:
  - (1) On first quality paper, plastic cards, or other suitable material as listed in ICAO Annex 1: 5.2; or
  - (2) As an electronic license on a self-contained mobile electronic visual display device as listed and specified in ICAO Annex 1: 5.3.

Note: Examples of self-contained mobile electronic visual display devices are mobile phones, tablets, or other mobile devices.

- (b) The license shall be issued:
  - (1) In a form and manner as prescribed in IS 2.2.8; and
  - (2) In the language of Sint Maarten.
- (c) The license shall contain the expiration date of the license and ratings.

#### 2.2.9 SUSPENSION OR REVOCATION OF A LICENSE, RATING, AUTHORIZATION OR CERTIFICATE

Note 1: see also part 1:3 of these regulations

#### 2.2.9.1 SUSPENSION OF A LICENSE, RATING AUTHORIZATION OR VALIDATION CERTIFICATE

- (a) If, in accordance with the National regulation containing general measures on Civil aviation safety Oversight ("Landsbesluit toezicht luchtvaart") the Authority determines that in the interest of safety requires that a license, rating, authorization or certificate must be suspended, the Authority may act as follows:
  - (1) If the Authority discovers facts indicating either a lack of competency or lack of qualification, the Authority may require an applicant for, or the holder of, any license, rating, authorization, or validation certificate to retake all or part of the knowledge or practical tests required for any license, rating, authorization, or validation certificate at issue, renewal or re-issue. The Authority may suspend the validity of any such license, rating, authorization and/or validation certificate pending the results of such retesting.

- (2) The Authority will provide to a person, whose license, rating, authorization, or certificate has been amended, modified, suspended, or revoked written notice of the amendment modification, suspension, or revocation and an opportunity to be heard in accordance with 1.3 of these regulations.
- (3) The Authority may also, after notifying in writing the person involved, stating the reasons for such action, suspend the validity of any license, rating, authorization and/or validation certificate in the following cases:
  - (i) During the investigation of an aircraft disaster or incident;
  - (ii) In cases of proven misconduct, recklessness or excessive carelessness;
  - (iii) If the holder has acted in contradiction to the holder's privileges; and/or
  - (iv) Pending the investigation of a suspected violation of these regulations or the aviation law under which these regulations are affected.
- (4) Once the suspension is effective, the person involved shall immediately cease exercising the privileges of the affected license, certificate, rating or authorization. The person involved shall surrender to the Authority within 8 days of receiving the notification of the order all licenses or validation certificates in that person's possession that are subject to the suspension. If the person fails to surrender the documents under suspension, the Authority may revoke all such certificate(s) held by that person.
- (5) When a suspension is limited to one or more ratings mentioned on the license or validation certificate, the Authority swill provide the person involved with a new license or validation certificate omitting all ratings which are subject to the suspension.
- (6) The Authority may cancel a suspension in the following cases:
  - If the person under suspension has taken and passed the knowledge or practical tests required for any license, rating, or authorization at issue indicated in paragraph 2.2.9.1(a) of this subsection;
  - (ii) If the person involved has gained the required additional experience; or
  - (iii) By revocation of the license, rating, authorization and/or validation certificate.
- (7) Once the suspension has been cancelled, other than by revocation, the Authority will issue the person involved a new license or validation certificate.

#### 2.2.9.2 SUSPENSION OF A MEDICAL CERTIFICATE

- (a) In case of doubt, concerning the medical fitness of the holder of a medical certificate the Authority may determine that the person involved shall again repeat a complete or partial medical examination, and may suspend the validity of that medical certificate until the repeat examination is completed with favorable results.
- (b) The Authority may also be suspended the validity of a medical certificate in case of a temporary rejection on medical grounds.
- (c) The Authority will provide written notification of the suspension, stating the reasons for the suspension, to the person holding the medical certificate.
- (d) The person holding the suspended medical certificate shall surrender that medical certificate to the Authority within 8 days after the date of receiving the notification.
- (e) In cases in which the medical fitness of the person involved allows it, the Authority may provide the person with a suspended medical certificate of a particular class with a new medical certificate of a lower class.
- (f) The Authority may lift a suspension if the medical examination indicated paragraph 2.2.9.2 (a) of this subsection has been passed satisfactorily. If a suspension is lifted, the person involved shall receive a new medical certificate unless the medical certificate was revoked.

#### 2.2.9.3 REVOCATION OF LICENSES, RATINGS AUTHORIZATIONS OR CERTIFICATES

- (a) A license, rating, authorization or certificate shall be revoked if the holder has lost the skills for exercising the privileges mentioned in the document or fails to meet the appropriate medical standards as shown by the results of a medical examination or a test.
- (b) A license, rating, authorization, or certificate may be revoked if the holder has made a statement contrary to the truth in obtaining or maintaining that license, rating authorization or certificate, or has provided incorrect data at a medical examination and/or test required for the issue, maintenance or renewal of the license, rating, authorization, or certificate.
- (c) A license, rating, authorization or certificate shall be revoked in the case of proven misconduct, recklessness or excessive carelessness. The holder of the license will be notified in writing of the revocation with the reasons therefore.
- (d) A person who has had a license or certificate revoked shall be obliged to hand over to the Authority all the licenses or certificates in that person's possession applicable to the revocation within 8 days after the date of receiving notification from the Authority.
- (e) The person who has been denied the privilege to manipulate the controls of an aircraft by judgment of a court, shall be equally obliged to hand over to the Authority all licenses and certificates in that person's possession within 8 days after the person has taken cognizance of the judgment or after it can be reasonably assumed that the person has taken cognizance thereof.

### 2.3 PILOT LICENSES, CATEGORIES, RATINGS, AUTHORIZATIONS, ENDORSEMENTS, INSTRUCTORS FOR PILOT LICENSING, AND DESIGNATED PILOT EXAMINERS

2.3.1 GENERAL

#### 2.3.1.1 APPLICABILITY

(a) This Section prescribes the requirements for the issue, renewal and re-issue, if applicable, of pilot\* licenses, ratings and authorizations.

#### 2.3.1.2 GENERAL RULE CONCERNING LICENSES, RATINGS AND AUTHORIZATIONS, AND DESIGNATIONS

- (a) An applicant shall, before being issued any pilot license, rating, authorization or designation, meet such requirements in respect of age, knowledge, experience, flight instruction, skill, medical fitness and language proficiency as are specified for that license, rating or authorization.
- (b) A person shall not act as PIC or CP of an aircraft in any of the categories unless that person is the holder of a pilot license issued in accordance with the requirements of this part.
- (c) An applicant shall for renewal or re-issue of a license, rating, authorization or designation, meet the requirements as are specified for that license, rating, authorization or designation.

#### 2.3.1.3 AUTHORITY TO ACT AS A FLIGHT CREWMEMBER

- (a) A person shall not act as a pilot flight crew member of an aircraft registered in Sint Maarten unless a valid license or a validation certificate is held showing compliance with the requirements of this part and appropriate to the duties to be performed by that person.
- (b) No person may act as the PIC or CP of an aircraft unless that person holds the appropriate category, class and type rating for the aircraft to be flown.
- (c) During a skill test, the applicant acts as PIC but the safety pilot will intervene in safety situations.

#### 2.3.1.4 CREDITING OF FLIGHT TIME

- (a) A student pilot or the holder of a pilot license shall be entitled to be credited in full with all solo, dual instruction and PIC flight time towards the total flight time required for the initial issue of a pilot license or the issue of a higher grade of pilot license.
- (b) The holder of a pilot license, when acting as CP at a pilot station of an aircraft certificated for operation by a single pilot but required by Sint Maarten to be operated with a CP shall be entitled to be credited with not more than 50 per cent of the CP flight time towards the total flight time required for a higher grade of pilot license. Sint Maarten may authorize that flight time be credited in full towards the total flight time required if the aircraft is equipped to be operated by a CP and the aircraft is operated in a multi-crew operation.
- (c) The holder of a pilot license, when acting as CP at a pilot station of an aircraft certificated to be operated with a CP, shall be entitled to be credited in full with this flight time towards the total flight time required for a higher grade of pilot license.
- (d) The holder of a pilot license, when acting as PIC under supervision, shall be entitled to be credited in full with this flight time towards the total flight time required for a higher grade of pilot license.

### 2.3.1.5 LIMITATION OF PRIVILEGES OF PILOTS WHO HAVE ATTAINED THEIR 60TH BIRTHDAY AND CURTAILMENT OF PRIVILEGES OF PILOTS WHO HAVE ATTAINED THEIR 65TH BIRTHDAY

- (a) No person who holds a pilot license issued under this part shall serve as a PIC in single pilot operations on a civil aircraft of Sint Maarten registry engaged in commercial air transport operations if the person has reached the person's 60th birthday.
- (b) No person who holds a pilot license issued under this part shall serve as a pilot of a civil aircraft of Sint Maarten registry engaged in commercial air transport operations requiring more than one pilot if the person has reached the person's 65th birthday.

Note: Attention should be paid to new ICAO Annex 1 requirements for pilots who have attained their 60th birthday; the validity period of medical assessment shall be reduced to 6 months

#### 2.3.1.6 RECENT EXPERIENCE AND PROFICIENCY REQUIREMENTS NON-COMMERCIAL AIR TRANSPORT OPERATIONS

Note: For commercial air transport operations, see 8.4 of these regulations.

- (a) In order to maintain recency and proficiency, all pilots shall meet the applicable requirements in paragraphs 2.3.1.6(b) through (g) of this subsection.
- (b) No person shall operate as PIC of an aircraft unless, that pilot has within 24 months, accomplished a flight review that includes:
  - (1) A review of the current general operating and flight rules of Part 8 of these regulations;
  - (2) A review of those manoeuvres and procedures that, at the discretion of the person giving the review are necessary for the pilot to demonstrate the safe exercise of the privileges of the pilot license;
  - (3) A proficiency check in the appropriate aircraft for the license, ratings or authorizations held, unless within the past 24 months, the pilot has satisfactorily completed one of the following:
    - (i) A pilot proficiency check or practical test conducted by an authorized CAA examiner, for a pilot certificate, rating, or operating privilege; or
    - A practical test conducted by an authorized CAA examiner for the issuance of an FI certificate or an additional rating on an FI certificate, the renewal of an FI certificate, or the reinstatement of an FI certificate; and
  - (4) A logbook endorsement from an authorized instructor who gave the review, certifying that the person has satisfactorily completed the review required in paragraphs 2.3.1.6 (b)(3)(i) and (ii) and has completed the applicable proficiency check.
- (c) AIRCRAFT TYPE CERTIFICATED FOR MORE THAN ONE PILOT.

- (1) No person may act as PIC of an aircraft type certificated for more than one pilot or a turbojet aircraft unless, since the beginning of the past 12 calendar months, that pilot has passed a proficiency check in an aircraft, or in an FSTD approved for the purpose, with an authorized representative of the Authority.
- (2) No person may act as CP of an aircraft type certificated for more than one pilot unless, since the beginning of the past 12 calendar-months, that pilot has logged three take-offs and landings as the sole manipulator of the controls in the aircraft of the same type, or in an FSTD approved for the purpose, with each takeoff and landing to full stop, and has satisfactorily completed ground training appropriate to the aircraft type.
- (d) AIRCRAFT TYPE CERTIFICATED FOR SINGLE PILOT AND REQUIRING A TYPE RATING ON THE PILOT LICENSE. No person may act as PIC of an aircraft type certificated for a single pilot unless, since the beginning of the past 12 calendar-months, that pilot has passed a proficiency check with an authorized representative of the Authority in the category, class and type of aircraft to be operated, or in an FSTD approved for the purpose.
- (e) RECENCY FOR CARRIAGE OF PASSENGERS. No person may act as PIC or CP of an aircraft carrying passengers unless, within the preceding 90 days that pilot has:
  - (1) Made 3 takeoffs and landings as the sole manipulator of the flight controls in an aircraft of the same category and class and if a type rating is required, of the same type or in an FSTD approved for the purpose.
  - (2) For a tailwheel aeroplane, made the 3 takeoffs and landings in a tailwheel aeroplane with each takeoff and landing to a full stop.
  - (3) For night operations, made the 3 takeoffs and landings required by paragraph 2.3.1.6(e)(1) of this subsection at night, with each take-off and landing to a full stop.
- (f) IFR OPERATIONS. A pilot shall not operate as PIC of an aircraft under IFR or in weather conditions less than the minimums prescribed for VFR flight unless within the preceding 6 months, that pilot has:
  - (1) Had an instrument proficiency check on the manoeuvres in the IR Skill Test and Proficiency Check contained in the applicable CAA STSs; or
  - (2) Has logged in actual or simulated conditions 6 hours of instrument flight time including at least three hours in flight in the category of aircraft to include:
    - (i) Six instrument approaches;
    - (ii) Holding procedures and tasks; and
    - (iii) Intercepting and tracking courses through the use of navigational electronic systems.

#### 2.3.1.7 RECORDING OF FLIGHT TIME

- (a) Each person shall document and record the following time in a manner acceptable to the Authority as prescribed in IS 2.3.1.7:
  - (1) Training and experience used to meet the requirements for a license, rating, or authorization issued in accordance with this part; and
  - (2) The experience required to show recent flight experience according to the requirements of this part.

## 2.3.2 CATEGORY, CLASS AND TYPE RATINGS, CATEGORY II/III AUTHORIZATIONS, AND ENDORSEMENTS

#### 2.3.2.1 GENERAL

(a) The holder of a pilot license shall not be permitted to act as PIC or CP of an aircraft unless the holder has received the applicable ratings, authorizations and/or endorsements as follows:

- 1) The appropriate aircraft category rating specified in this part;
- 2) The appropriate class rating when required in accordance with this Part;
- 3) A type rating when required in accordance with this Part;
- 4) An authorization when required in accordance with this Part; or
- 5) An endorsement when required in accordance with this Part.
- (b) The applicant shall meet the appropriate requirements of this Part for the aircraft rating, authorization or endorsement sought.
- (c) When an applicant demonstrates skill and knowledge for the initial issue or re-issue of a pilot license, the category and ratings appropriate to the class or type of aircraft used in the demonstration will be entered on the license.
- (d) (For the purpose of training, testing or specific special purpose non-revenue, non-passenger carrying flights, special authorization may be provided in writing to the license holder by the Authority in place of issuing the class or type rating in accordance with paragraph 2.3.2.1(a) of this subsection. This authorization shall be limited in validity to the time needed to complete the specific flight.

#### 2.3.2.2 CATEGORY RATINGS

- (a) The category of aircraft shall be endorsed on the license as a rating.
- (b) INITIAL CATEGORY RATING.
  - (1) An applicant for a pilot's license, after successfully meeting all requirements for the issuance of the license as contained in this Part, shall receive the appropriate license with the aircraft category, and if applicable, class or type rating endorsed on the license.
- (c) Additional category ratings:
  - (1) Any additional category rating endorsed on a pilot license shall indicate the level of licensing privileges at which the category rating is granted.
  - (2) The holder of a pilot license seeking an additional category rating shall:
    - (i) Meet the requirements of this Part appropriate to the privileges for which the category rating is sought;
    - Have an endorsement in that license holder's logbook or training record from an authorized instructor that the applicant has been found competent in the required aeronautical knowledge and flight instruction areas;
    - (iii) Pass the required knowledge test; and
    - (iv) Pass the required skill test for the aircraft category, and if applicable, the class rating being sought.
- (d) PRIVILEGES. Subject to compliance with the requirements specified in this Part, the privileges of the holder of a class rating are to act as a pilot on the class of aircraft specified in the rating.
- (e) The validity, renewal or reissue of the category rating will coincide with the requirements for the validity, renewal or reissue of the license, and if applicable the class or type rating contained in this Part.

#### 2.3.2.3 CLASS RATINGS

- (a) The class of aircraft, if applicable, shall be endorsed on the license as a rating.
- (b) INITIAL CLASS RATING.
  - (1) An applicant for a pilot license, after successfully meeting all the requirements for the issuance of the license as contained in this Part, shall receive the appropriate license with the aircraft category, class, and if applicable, type rating endorsed on the license.

#### (c) ADDITIONAL CLASS RATINGS.

- (1) Any additional class rating endorsed on a pilot license shall indicate the level of licensing privileges at which the class rating is granted.
- (2) The holder of a pilot license seeking an additional class rating shall:
  - (i) Meet the requirements of this Part appropriate to the privileges for which the class rating is sought;
  - (ii) Have an endorsement in that license holder's logbook or training record from an authorized instructor that the applicant has been found competent in the required aeronautical knowledge and flight instruction areas;
  - (iii) Pass the required knowledge test unless the applicant holds a class rating within the same category of aircraft, at the same level of pilot license at either the private or commercial levels; and
  - (iv) Pass the required skill test for the aircraft class rating being sought.
- (d) PRIVILEGES. Subject to compliance with the requirements specified in this Part, the privileges of the holder of a class rating are to act as a pilot on the class of aircraft specified in the rating.
- (e) VALIDITY: Subject to compliance with the requirements specified in this Part, the validity period of:
  - (1) A multi-engine class rating is 1 calendar year, and.
  - (2) A single-engine class rating is 2 calendar years.
- (f) RENEWAL TIMEFRAME
  - (1) For the renewal of a single-engine class rating the pilot shall:
    - (i) Within the preceding 24 calendar months, complete a proficiency check on areas of operation listed in the skill test that is applicable to the level of license, category and class rating; and
    - (ii) Have completed 12 hours of flight time within the 12 months preceding the expiry date.
  - (2) For the renewal of a multi-engine class rating the pilot shall:
    - (i) Within the preceding 12 calendar months, complete a proficiency check on the subjects listed in the skill test that is applicable to the level of license, category and class rating; and
    - (ii) Have completed 10 route sectors within the 3 months preceding the expiry date.
  - (3) Where applicable the proficiency check shall include instrument procedures, including instrument approach and landing procedures under normal, abnormal and emergency conditions, including simulated engine failure.
  - (4) If a pilot takes the proficiency check required in this section in the calendar month before or the calendar month after the month in which it is due, the pilot is considered to have taken it in the month in which it was due for the purpose of computing when the next proficiency check is due.
- (g) RE-ISSUE.
  - (1) If the class rating has expired the applicant shall
    - (i) Have received refresher training from an authorized instructor with an endorsement that the person is prepared for the required skill test; and
    - (ii) Pass the required skill test for the applicable aircraft category and/or class.
  - (2) Where applicable the skill test shall include instrument procedures, including instrument approach and landing procedures under normal, abnormal and emergency conditions, including simulated engine failure.

#### 2.3.2.4 TYPE RATINGS

- (a) The type rating shall be endorsed on the license as a rating, including any limitations.
- (b) The holder of a pilot license seeking an additional aircraft type rating shall:
  - (1) Have received training from an authorized instructor in the applicable type of aircraft and/or approved FSTD, including the following:
    - (i) Normal flight procedures and manoeuvres during all phases of flight;
    - (ii) Abnormal and emergency procedures and manoeuvres in the event of failures and malfunctions of equipment, such as engine, systems and airframe
    - (iii) Where applicable, instrument procedures, including instrument approach, missed approach and landing procedures under normal, abnormal and emergency conditions, including simulated engine failure;
    - (iv) Procedures for crew incapacitation and crew coordination including allocation of pilot tasks, crew cooperation and use of checklists; and
    - (v) For the issue of an aeroplane category type rating, upset prevention and recovery training.
  - (2) Hold or concurrently obtain an IR that is appropriate to the aircraft category, class or type rating sought;
  - (3) Have an endorsement in that license holder's logbook or training record from an authorized instructor that the applicant has been found competent in the required aeronautical knowledge and flight instruction areas;
  - (4) Demonstrate the skill and knowledge required for the safe operation of the applicable type of aircraft, relevant the duties of a PIC or a CP; and
  - (5) Demonstrate, at the ATPL level, an extent of knowledge as specified in paragraph 2.3.7.1
    (c) of this part.
  - (6) Pass the required skill test at the ATPL level, applying CRM concepts, applicable to the aircraft category, class and type rating being sought;
    - (i) Applicants seeking a private or commercial license in an aircraft that requires a type rating shall also complete the applicable portions of either the PPL or CPL skill test in conjunction with the ATPL skill test.
  - (7) Perform the skill test under IFR unless the aircraft used for the skill test is not capable of the instrument manoeuvres and procedures required for the skill test in which case the applicant may:
    - (i) Obtain a type rating limited to "VFR only," and
    - (ii) Remove the "VFR only" limitation for each aircraft type in which the applicant demonstrates compliance with the ATPL skill test under instrument conditions.
- (c) PRIVILEGES. Subject to compliance with the requirements specified in this Part, the privileges of the holder of a type rating are to act as a pilot on the type of aircraft specified in the rating. When a type rating is issued limiting the privileges to act as CP or limiting the privileges to act as pilot only during the cruise phase of flight, such limitation shall be endorsed on the rating.
- (d) VALIDITY. Subject to compliance with the requirements in this Part, the validity period of a type rating is 2 calendar year.
- (e) RENEWAL.
  - (1) For the renewal of a type rating the pilot shall:
    - Within the preceding 12 calendar months, complete a proficiency check: in the areas of operation listed in the skill test for the appropriate category, type and if applicable class of aircraft; and

- (ii) Have completed a minimum of 3 take off and landing with the type rated aircraft or simulator.
- (2) If a pilot takes the proficiency check required in this section in the calendar month before or the calendar month after the month in which it is due, the pilot is considered to have taken it in the month in which it was due for the purpose of computing when the next proficiency check is due.
- (f) REISSUE. If the type rating has expired the applicant shall:
  - (1) Have received refresher training from an authorized instructor with an endorsement that the person is prepared for the required skill test; and
  - (2) Pass the required skill test for the appropriate category, type and if applicable class of aircraft.

Note : The aeroplane upset prevention and recovery training may be integrated in the type rating programme or may be conducted immediately after, as an additional module.

#### 2.3.2.5 CATEGORY II AND III AUTHORIZATION

- (a) The Authority will issue a CAT II or CAT III pilot authorization by letter, to accompany the pilot's license, when the pilot meets the requirements contained in this subsection and in IS 2.3.2.5.
- (b) GENERAL.
  - (1) A person, not flying for an AOC holder under Part 9 of these regulations, may not act as pilot of an aircraft during CAT II or III operations unless that person holds a CAT II or III pilot authorization for that category, class or type of aircraft.
  - (2) The applicant for a CAT II or III pilot authorization shall:
    - (i) Hold a pilot license with an IR or an ATPL; and
    - (ii) Hold a category and class or type rating for the aircraft for which the authorization is sought.
- (c) KNOWLEDGE. The applicant for a CATII or III pilot authorization shall have completed the theoretical knowledge instruction on the subjects as listed in IS 2.3.2.5.
- (d) EXPERIENCE. The applicant for a CAT II or III pilot authorization shall have at least:
  - (1) 50 hours of night flight time as PIC;
  - (2) 75 hours of instrument time under actual or simulated instrument conditions; and
  - (3) 250 hours of cross-country flight time as PIC.
- (e) FLIGHT INSTRUCTION. The applicant for a CAT II or III pilot authorization shall have completed the flight instruction on the areas of operation listed in IS 2.3.2.5.
- (f) SKILL. The applicant for a CAT II or III pilot authorization shall pass a skill test including the areas of operation listed in IS 2.3.2.5.
- (g) VALIDITY. Subject to compliance with the requirements specified in this Part, the validity period of a CAT II or III authorization is 6 months.
- (h) RENEWAL. For the renewal of a CAT II or III pilot authorization the pilot shall have completed a proficiency check including the areas of operation listed in IS 2.3.2.5.
- (i) RE-ISSUE. If the CAT II or III has expired the applicant shall:
  - (1) Have received refresher training from an authorized instructor with an endorsement that the person is prepared for the required skill test; and
  - (2) Pass the required skill test on the subjects listed in IS 2.3.2.5.

#### 2.3.2.6 COMPLEX AEROPLANE ENDORSEMENT

- (a) No person shall act as PIC of a complex aeroplane, including a seaplane, unless the person has:
  - (1) Received and logged ground and flight training from an authorized instructor in a complex aeroplane or an FSTD that is representative of a complex aeroplane and has been found proficient in the operation and systems of the aeroplane; and
  - (2) Received a one-time endorsement in the pilot's logbook from an authorized instructor who certifies that person is proficient to operate a complex aeroplane.

#### 2.3.2.7 HIGH PERFORMANCE AEROPLANE ENDORSEMENT

- (a) No person shall act as PIC of a high-performance aeroplane unless the person has:
  - (1) Received and logged ground and flight training from an authorized instructor in a highperformance aeroplane or an FSTD that is representative of a high-performance aeroplane and has been found proficient in the operation and systems of the aeroplane; and
  - (2) Received a one-time endorsement in the pilot's logbook from an authorized instructor who certifies that person is proficient to operate a high-performance aeroplane.

#### 2.3.2.8 HIGH ALTITUDE AIRCRAFT ENDORSEMENT

- (a) No person shall act as PIC of a pressurized aircraft capable of operating at high altitudes (an aircraft that has a service ceiling or maximum operating altitude, whichever is lower, above 25,000 ft MSL) unless the person has:
  - (1) Received and logged ground training from an authorized instructor and received an endorsement in the logbook from the instructor certifying the person has satisfactorily accomplished ground training in at least the following subjects:
    - (i) High-altitude aerodynamics and meteorology;
    - (ii) Respiration;
    - (iii) Effects, symptoms, and causes of hypoxia and any other high-altitude sickness;
    - (iv) Duration of consciousness without supplemental oxygen;
    - (v) Effects of prolonged usage of supplemental oxygen;
    - (vi) Causes and effects of gas expansion and gas bubble formation;
    - (vii) Physical phenomena and incidents of decompression; and
    - (viii) Any other physiological aspects of high-altitude flight.
  - (2) Received and logged flight training from an authorized instructor and received an endorsement in the logbook from the instructor certifying the person has satisfactorily accomplished flight training in a pressurized aircraft or in an FSTD that is representative of a pressurized aircraft, in at least the following subjects:
    - (i) Normal cruise flight operations while operating above 25,000 ft MSL;
    - (ii) Proper emergency procedures for simulated rapid decompression without actually depressurizing the aircraft; and
    - (iii) Emergency descent procedures.

- 2.3.2.9 RESERVED
- 2.3.3 RESERVED
- 2.3.3.1 RESERVED
- 2.3.3.2 RESERVED
- 2.3.4 PRIVATE PILOT LICENSE

#### 2.3.4.1 GENERAL REQUIREMENTS

- (a) AGE.
  - (1) The applicant for a PPL in all categories other than shall be at least 17 years of age.
  - (2) The applicant for a PPL in the balloon or glider category shall be at least 16 years of age.
- (b) MEDICAL FITNESS. The applicant for a PPL shall hold a current Class 2 Medical Certificate as issued under this Part.
- (c) KNOWLEDGE AREAS. The applicant for a PPL shall receive and log ground training from an authorized instructor on the following subjects appropriate to the privileges granted to the holder of a PPL and appropriate to the category of aircraft to be included on the license:
  - (1) AIR LAW:
    - (i) Rules and regulations relevant to the holder of a PPL, rules of the air, appropriate ATS practices and procedures.
  - (2) AIRCRAFT GENERAL KNOWLEDGE:
    - (i) Principles of operation and functioning of engines, systems and instruments.
    - Operating limitations of aeroplanes and the relevant category of aircraft and powerplants; relevant operational information from the flight manual or other appropriate document.
    - (iii) For helicopter transmission (power-trains) where applicable;
  - (3) FLIGHT PERFORMANCE AND PLANNING:
    - (i) Effects of loading and mass distribution on flight characteristics, mass and balance calculations.
    - (ii) Use and practical application of take-off or launching, landing and other performance data.
    - (iii) Pre-flight and en-route flight planning appropriate to private operations under VFR, preparation and filing of ATS flight plans, appropriate ATS procedures, position reporting procedures, altimeter setting procedures, operations in areas of high-density traffic.
  - (4) HUMAN PERFORMANCE:
    - (i) Human performance relevant to the appropriate category of aircraft.
    - (ii) Principles of threat and error management.
  - (5) METEOROLOGY:
    - Application of elementary aeronautical meteorology, use of, and procedures for obtaining, meteorological information, altimetry, hazardous weather conditions.
  - (6) NAVIGATION.
    - (i) Practical aspects of air navigation and dead-reckoning techniques, including the use of aeronautical charts, instruments and navigation aids.

- (7) OPERATIONAL PROCEDURES.
  - (i) Application of threat and error management to operational procedures.
  - (ii) Altimeter setting procedures.
  - (iii) Use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations.
  - (iv) Appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather, wake turbulence and other operating hazards.
  - (v) In the case of helicopter, and if applicable, powered lift, settling with power; ground resonance; retreating blade stall, dynamic roll-over and other operating hazards, safety procedures, associated with flight under VMC.
- (8) PRINCIPLES OF FLIGHT:
  - (i) Principles of flight relating to the appropriate category of aircraft; and.
- (9) RT.
  - (i) Communication procedures and phraseology as applied to VFR operations; action to be taken in case of communication failure.
- (d) KNOWLEDGE TESTING. The applicant for a PPL shall:
  - (1) Have received an endorsement for the knowledge test from an authorized instructor who:
    - (i) Conducted the training on the knowledge subjects; and
    - (ii) Certifies that the person is prepared for the required knowledge test, and
  - (2) Pass the required written knowledge test on the knowledge areas listed in paragraph 2.3.4.1(c) of this subsection.
- (e) EXPERIENCE AND FLIGHT INSTRUCTION. An applicant for a PPL shall have completed the experience and flight instruction requirements appropriate to the aircraft category as specified in this part.
- (f) SKILL. The applicant for a PPL shall have:
  - (1) Received an endorsement from an authorized instructor who certifies that the person is prepared for the required skill test.
  - (2) Demonstrated by passing a skill test the ability to perform as PIC of an aircraft, within the appropriate category areas of operation described in the appropriate IS listed below, with a degree of competency appropriate to the privileges granted to the holder of a PPL; and
  - (3) Demonstrated the ability to:
    - (i) Recognize and manage threats;
    - (ii) Operate the aircraft within its limitations;
    - (iii) Complete all manoeuvres with smoothness and accuracy;
    - (iv) Exercise good judgment and airmanship;
    - (v) Apply aeronautical knowledge; and
    - (vi) Maintain control of the aircraft at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.
- (g) PRIVILEGES. Subject to compliance with the requirements specified in this Part, the privileges of the holder of a PPL shall be to act, but not for remuneration, as PIC or co-pilot of an aeroplane aircraft within the appropriate aircraft category engaged in non-revenue flights.
- (h) VALIDITY. Subject to compliance with the requirements specified in this Part, the validity period of the license is 5 years. For renewal or reissue, see 2.2.1.7.

- (i) RENEWAL. A PPL that has not expired may be renewed for an additional five years if the holder presents to the Authority satisfactory evidence that the license, medical certificate, and recency of experience are current.
- (j) REISSUE. If the PPL has expired, the applicant shall have received refresher training acceptable to the Authority and shall pass the private pilot skill test.

#### 2.3.4.2 EXPERIENCE, FLIGHT INSTRUCTION AND SKILL TEST FOR THE PPL – AEROPLANE CATEGORY

- (a) EXPERIENCE.
  - (1) The applicant for a PPL(A) shall have completed not less than 40 hours of flight time, or 35 hours if completed during a course of approved training, as a pilot of aeroplanes, appropriate to the class rating sought. The Authority shall determine whether experience as a pilot under instruction in an FSTD is acceptable as part of the total flight time of 40 or 35 hours, as the case may be. Credit for such experience shall be limited to a total of 5 hours if completed under instruction in an FSTD approved by the Authority.
  - (2) The applicant for a PPL(A) shall have completed in aeroplanes not less than 10 hours of solo flight time under the supervision of an authorized FI, including 5 hours of solo cross-country flight time with at least one cross-country flight totaling not less than 270 km (150 NM) in the course of which full-stop landings at two different aerodromes shall be made.
  - (3) The holder of pilot licenses in other categories may be credited with 10 hours of the total flight time as PIC towards a PPL(A).

#### (b) FLIGHT INSTRUCTION.

- (1) The applicant for a PPL(A) shall received and logged not less than 20 hours of dual instruction from an authorized instructor on the subjects listed in the CAA STSs for PPL(A). These 20 hours may include 5 hours completed in an FSTD. The 20 hours of dual instruction shall include at least 5 hours of solo cross-country flight time with at least one cross-country flight totaling not less than 270 km (150 NM) in the course of which full-stop landings at two different aerodromes shall be made.
- (2) The instructor shall ensure that the applicant for a PPL (A) has operational experience in at least the following areas to the level of performance required for the private pilot:
  - (i) Recognize and manage threats and errors;
  - (ii) Pre-flight operations, including mass and balance determination, aeroplane inspection and servicing;
  - (iii) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
  - (iv) Control of the aeroplane by external visual reference;
  - (v) Flight at critically slow airspeeds, recognition of, and recovery from, incipient and full stalls;
  - (vi) Flight at critically high airspeeds, recognition of, and recovery from, spiral dives;
  - (vii) Normal and cross-wind take-offs and landings;
  - (viii) Maximum performance (short field and obstacle clearance take-offs, short-field landings);
  - (ix) Flight by reference solely to instruments, including the completion of a level 180 degrees turn;
  - (x) Cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids;
  - (xi) Emergency operations, including simulated aeroplane equipment malfunctions;

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- (xii) Operations to, from and transiting controlled aerodromes, compliance with ATS procedures,
- (xiii) RT procedures and phraseology; and
- (xiv) As further specified in the CAA STSs for PPL (A).
- (3) If the privileges of the PPL(A) are to be exercised at night, the applicant shall have received 4 hours of dual instruction in aeroplanes in night flying, including take-offs, landings, and 1 hour of navigation.

Note 1: Some States require night flying as part of the PPL training. Other States require a separate night endorsement, and this practice is due to prohibition of flying at night without an IR. If a State requires a separate night endorsement, it shall be noted on the license.

Note 2: Training can be performed by an individually authorized FI, by an authorized FI in a flying club, or in an ATO

(c) The requirements for the skill test for the PPL(A) are included in the CAA STSs for PPL(A).

#### 2.3.4.3 EXPERIENCE, FLIGHT INSTRUCTION AND SKILL TEST FOR THE PPL—HELICOPTER CATEGORY

- (a) EXPERIENCE.
  - (1) The applicant for a PPL(H) shall have completed not less than 40 hours of flight time, or 35 hours if completed during a course of approved training, as a pilot of helicopters. The Authority shall determine whether experience as a pilot under instruction in an FSTD is acceptable as part of the total flight time of 40 or 35 hours, as the case may be. Credit for such experience shall be limited to a total of 5 hours if completed under instruction in a FSTD approved by the Authority.
  - (2) The applicant for a PPL(H) shall have completed in helicopters not less than 10 hours of solo flight time under the supervision of an authorized FI, including 5 hours of solo cross country flight time with at least one cross-country flight totaling not less than 180 km (100 NM) in the course of which landings at two different points shall be made.
  - (3) The holder of pilot licenses in other powered aircraft categories may be credited with 10 hours of the total flight time as PIC towards a PPL(H).
- (b) FLIGHT INSTRUCTION.
  - (1) The applicant for a PPL(H) shall have received and logged not less than 20 hours of dual instruction from an authorized instructor on the subjects listed in the CAA STSs for PPL(H). These 20 hours may include 5 hours completed in an FSTD. The 20 hours of dual instruction shall include at least 5 hours of solo cross-country flight time with at least one cross-country flight totaling not less than 180 km (100 NM) in the course of which landings at two different points shall be made.
  - (2) The instructor shall ensure that the applicant for a PPL(H) has operational experience in at least the following areas to the level of performance required for the private pilot:
    - (i) Recognize and manage threats and errors;
    - (ii) Pre-flight operations, including mass and balance determination, helicopter inspection and servicing;
    - (iii) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
    - (iv) Control of the helicopter by external visual reference;
    - (v) Recovery at the incipient stage from settling with power; recovery techniques from low-rotor rpm within the normal range of engine rpm;
    - (vi) Ground manoeuvring and run-ups, hovering, take-offs and landings normal, out of wind and sloping ground;

- (vii) Take-offs and landings with minimum necessary power, maximum performance take-off and landing techniques, restricted site operations, quick stops;
- (viii) Cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids including a flight of at least one hour;
- (ix) Emergency operations, including simulated helicopter equipment malfunctions, autorotative approach and landing; and
- (x) Operations to, from and transmitting controlled aerodromes, compliance with air traffic services procedures, radiotelephony procedures and phraseology.
- (xi) RT procedures and phraseology; and
- (xii) As furthered specified in the CAA STSs for PPL(H).
- (3) If the privileges of the PPL(H) are to be exercised at night, the applicant shall have received 4 hours of dual instruction in helicopters in night flying, including take-offs, landings, and 1 hour of navigation
- (c) The requirements for the skill test for the PPL(H) are included in the CAA STSs for PPL(H).
- 2.3.4.4 RESERVED
- 2.3.4.5 RESERVED
- 2.3.4.6 RESERVED
- 2.3.4.7 RESERVED
- 2.3.5 COMMERCIAL PILOT LICENSE

#### 2.3.5.1 GENERAL REQUIREMENTS

- (a) AGE. The applicant for a CPL shall be at least 18 years of age.
- (b) MEDICAL FITNESS. The applicant for a CPL shall hold a current Class 1 Medical Certificate issued under this Part.
- (c) KNOWLEDGE AREAS. The applicant for a CPL shall receive and log ground training from an authorized instructor on the following subjects appropriate to the privileges granted to the holder of a CPL and appropriate to the category of aircraft to be included on the license:
  - (1) AIR LAW:
    - (i) Rules and regulations relevant to the holder of a CPL;
    - Rules of the air, appropriate ATS practices and procedures;
  - (2) AIRCRAFT GENERAL KNOWLEDGE;
    - (i) Principles of operation and functioning of powerplants, systems and instruments;
    - Operating limitations of the appropriate category of aircraft and powerplants, relevant operational information from the flight manual or other appropriate document;
    - (iii) Use and serviceability checks of equipment and systems of appropriate aircraft;
    - Maintenance procedures for airframes, systems and powerplants of appropriate aircraft;
    - (v) For helicopters and powered-lift, transmission (power-trains) where applicable; and
    - (vi) For airships and balloons, physical properties and practical application of gases.
  - (3) FLIGHT PERFORMANCE, PLANNING AND LOADING:

- (i) Effects of loading and mass distribution on aircraft handling, flight characteristics and performance, mass and balance calculations;
- (ii) Use and practical application of take-off or launching, landing and other performance data;
- (iii) Pre-flight and en-route flight planning appropriate to commercial operations under VFR; preparation and filing of ATS flight plans, appropriate ATS procedures; and
- (iv) In the case of airships, helicopter and powered-lift, effects of external loading on handling.
- (4) HUMAN PERFORMANCE:
  - (i) Human performance relevant to the appropriate aircraft type; and
  - (ii) Principles of threat and error management.
- (5) METEOROLOGY:
  - Interpretation and application of aeronautical meteorological reports, charts and forecasts, use of, and procedures for obtaining, meteorological information, preflight and in-flight; altimetry;
  - (ii) 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; and
  - (iii) Causes, recognition and effects of icing, frontal zone penetration procedures, hazardous weather avoidance.
- (6) NAVIGATION:
  - Air navigation, including the use of aeronautical charts, instruments and navigation aids;
  - (ii) An understanding of the principles and characteristics of appropriate navigation systems; and
  - (iii) Operation of air borne equipment.
  - (iv) In the case of airships:
    - A) Use, limitation and serviceability of avionics and instruments necessary for control and navigation;
    - B) Use, accuracy and reliability of navigation systems used in departure, en-route, approach and landing phases of flight, identification of radio navigation aids; and
    - C) Principles and characteristics of self-contained and external referenced navigation systems, operations of airborne equipment.
- (7) OPERATIONAL PROCEDURES:
  - (i) Application of threat and error management to operational performance;
  - (ii) Use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;
  - (iii) Altimeter setting procedures;
  - (iv) Appropriate precautionary and emergency procedures;
  - (v) Operational procedures for carriage of freight; potential hazards associated with dangerous goods;
  - (vi) Requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from aircraft; and

- (vii) In the case of helicopters, and if applicable powered-lifts, settling with power, ground resonance; retreating blade stall; dynamic roll-over and other operating hazards; safety procedures, associated with flight under VMC.
- (8) PRINCIPLES OF FLIGHT:
  - (i) Principles of flight relating to the appropriate category of aircraft.
- (9) RT.
  - (i) Communication procedures and phraseology as applied to VFR operations; action to be taken in case of communication failure; and
  - (ii) As further specified in the applicable CAA STSs.
- (d) KNOWLEDGE TESTING. The applicant for a CPL shall:
  - (1) Have received an endorsement for the knowledge test from an authorized instructor who:
    - (i) Conducted the training on the knowledge subjects; and
    - (ii) Certifies that the person is prepared for the required knowledge test; and
  - (2) Pass the required knowledge test on the knowledge subjects listed in the applicable CAA knowledge test guide.
- (e) EXPERIENCE AND FLIGHT INSTRUCTION. An applicant for a CPL shall have completed the experience and flight instruction requirements appropriate to the aircraft category as specified in this part.
- (f) SKILL. The applicant for a CPL shall have:
  - (1) Received an endorsement from an authorized instructor who certifies that the person is prepared for the required skill test; and
  - (2) Demonstrated by passing a skill test the ability to perform as PIC of an aeroplane, the areas of operation described in the applicable CAA STSs with a degree of competency appropriate to the privileges granted to the holder of a CPL, and to:
    - (i) Operate the aeroplane within its limitations;
    - (ii) Complete all manoeuvres with smoothness and accuracy;
    - (iii) Exercise good judgment and airmanship;
    - (iv) Apply aeronautical knowledge; and
    - (v) Maintain control of the aeroplane at all times in a manner such that the successful outcome of a procedure or manoeuvre is never seriously in doubt.
- (g) PRIVILEGES. Subject to compliance with the requirements specified in this Part, the privileges of the holder of a CPL shall be:
  - (1) To exercise all the privileges of the holder of a PPL in an aircraft within the appropriate aircraft category;
  - (2) To act as PIC of an aircraft within the appropriate aircraft category engaged in operations other than commercial air transportation;
  - (3) To act as PIC in commercial air transportation of an aircraft within the appropriate aircraft category and certificated for single-pilot operation;
  - (4) To act as CP of an aircraft within the appropriate aircraft category required to be operated with a CP; and
  - (5) For the airship category, to pilot an airship under IFR.
- (h) VALIDITY. Subject to compliance with the requirements specified in this Part, the validity period of the license is 2 years.

- (i) RENEWAL. A CPL that has not expired may be renewed for an additional five years if the holder presents to the Authority satisfactory evidence that the license, medical certificate, and recency of experience are current.
- (j) REISSUE. If the CPL has expired, the applicant shall have received refresher training acceptable to the Authority and shall pass the private pilot skill test.

#### 2.3.5.2 EXPERIENCE, FLIGHT INSTRUCTION AND SKILL TEST FOR THE CPL—AEROPLANE CATEGORY

- (a) EXPERIENCE.
  - (1) The applicant for a CPL(A) shall have completed not less than 200 hours of flight time, or 150 hours if completed during a CAA approved training course provided by an ATO under Part 3 of these regulations, as a pilot of aeroplanes, of which 20 hours may have been completed in an FSTD.
  - (2) The applicant for a CPL (A) shall have completed in aeroplanes not less than:
    - (i) 100 hours as PIC or, in the case of a course of approved training, 70 hours as PIC;
    - 20 hours of cross-country flight time as PIC including a cross-country flight totaling not less than 540 km (300 NM) in the course of which full-stop landings at two different aerodromes shall be made;
    - (iii) 10 hours of instrument instruction time of which not more than 5 hours may be instrument ground time; and
    - (iv) If the privileges of the license are to be exercised at night, 5 hours of night flight time including 5 take-offs and 5 landings as PIC.
  - (3) The holder of a pilot license in another category may be credited towards the 200 hours of flight time as follows:
    - (i) 10 hours as PIC in a category other than helicopters; or
    - (ii) 30 hours as PIC holding a PPL(H) in helicopters; or
    - (iii) 100 hours as PIC holding a CPL(H) in helicopters.
  - (4) The applicant for a CPL(A) shall hold a PPL(A) issued under this Part.
- (b) FLIGHT INSTRUCTION.
  - (1) The applicant for a CPL(A) shall have received and logged not less than 25 hours of dual instruction from an authorized instructor. These 25 hours may include 5 hours completed in an FSTD.
  - (2) 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:
    - (i) Recognize and manage threats and errors;
    - (ii) Pre-flight operations, including mass and balance determination, aeroplane inspection and servicing;
    - (iii) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
    - (iv) Control of the aeroplane by external visual reference;
    - (v) Flight at critically slow airspeeds; spin avoidance; recognition of, and recovery from, incipient and full stalls;
    - (vi) Flight with asymmetrical power for multi-engine class or type ratings;
    - (vii) Flight at critically high airspeeds, recognition of, and recovery from, spiral dives;
    - (viii) Normal and cross-wind take-offs and landings;

- Maximum performance (short field and obstacle clearance take-offs, short-field landings);
- (x) Basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;
- (xi) Cross-country flying using visual reference, dead reckoning and radio navigation aids, diversion procedures;
- (xii) Abnormal and emergency procedures and manoeuvres including simulated aeroplane equipment malfunctions;
- (xiii) Operations to, from, and transiting controlled aerodromes, compliance with ATS procedures;
- (xiv) RT procedures and phraseology; and
- (xv) Upset prevention and recovery training in actual flight.
- (3) If the privileges of the CPL(A) are to be exercised at night, the applicant shall have received 4 hours dual instruction in aeroplanes in night flying, including take-offs, landings and 1 hour of navigation.
- (c) SKILL TEST. The requirement for the skill test for the CPL(A) category are included in the CAA STSs for CPL(A).

Note: The aeroplane upset prevention and recovery training may be integrated in the type rating programme or may be conducted immediately after, as an additional module.

#### 2.3.5.3 EXPERIENCE, FLIGHT INSTRUCTION AND SKILL TEST FOR THE CPL—HELICOPTER CATEGORY

- (a) EXPERIENCE.
  - (1) The applicant for a CPL(H) license shall have completed not less than 150 hours of flight time, or 100 hours if completed during an integrated course of approved training provided by an ATO under Part 3 of these regulations, as a pilot of helicopters, of which 10 hours may have been completed in an FSTD.
  - (2) The applicant for a CPL(H) shall have completed in helicopters not less than:
    - (i) 35 hours as PIC;
    - (ii) 10 hours of cross-country flight time as PIC including a cross-country flight in the course of which full-stop landings at two different points shall be made;
    - (iii) 10 hours of instrument instruction time of which not more than 5 hours may be instrument ground time; and
    - (iv) If the privileges of the license are to be exercised at night, 5 hours of night flight time including 5 take-offs and 5 landings as PIC.
  - (3) The holder of a pilot license in another category may be credited towards the 150 hours of flight time as follows:
    - (i) 20 hours as PIC holding a PPL(A) in aeroplanes; or
    - (ii) 50 hours as PIC holding a CPL (A) in aeroplanes.
  - (4) The applicant for a CPL(H) shall hold a PPL(H) under this Part.
- (b) FLIGHT INSTRUCTION.
  - (1) The applicant for a CPL(H) shall have received and logged not less than 30 hours of dual instruction in helicopters from an authorized FI on the subjects listed in the CAA STSs for CPL(H).
  - (2) 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:
- (i) Recognize and manage threats and errors;
- (ii) Pre-flight operations, including mass and balance determination, helicopter inspection and servicing;
- (iii) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
- (iv) Control of the helicopter by external visual reference;
- (v) Recovery at the incipient stage from settling with power, recovery techniques from low-rotor rpm within the normal range of engine rpm;
- Ground manoeuvring and run-ups, hovering, take-offs and landings normal, out of wind and sloping ground, steep approaches;
- (vii) Take-offs and landings with minimum necessary power; maximum performance take-off and landing techniques, restricted site operations, quick stops;
- (viii) Hovering out of ground effect, operations with external load, if applicable, flight at high altitude;
- Basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;
- (x) Cross-country flying using visual reference, dead reckoning and radio navigation aids, diversion procedures;
- (xi) Abnormal and emergency procedures, including simulated helicopter equipment malfunctions, autorotative approach and landing; and
- (xii) Operations to, from and transiting controlled aerodromes, compliance with ATS procedures;
- (xiii) RT procedures by phraseology; and
- (xiv) As further specified in the CAA STSs for CPL(H)
- (3) If the privileges of the license are to be exercised at night, the applicant shall have received 4 hours of dual instruction in helicopters in night flying, including take-offs, landings and 1 hour of navigation.
- (c) SKILL TEST. The requirement for the skill test for the CPL(H) category are included in the CAA STSs for CPL(H).

#### 2.3.5.4 RESERVED

- 2.3.5.5 RESERVED
- 2.3.5.6 RESERVED
- 2.3.5.7 RESERVED
- 2.3.6 MULTI-CREW PILOT LICENSE—AEROPLANE

#### 2.3.6.1 GENERAL REQUIREMENTS

- (a) AGE. The applicant for an MPL shall be at least 18 years of age.
- (b) MEDICAL FITNESS. The applicant for an MPL(A) shall hold a current Class 1 medical certificate issued under this Part.
- (c) KNOWLEDGE. The applicant for an MPL(A) shall meet the requirements specified in paragraph 2.3.7.1 (c) of this part for the ATPL appropriate to the aeroplane category.
- (d) KNOWLEDGE TESTING. The applicant for an MPL(A) shall
  - (1) Have received an endorsement for the knowledge test from an authorized instructor who:

- (i) Conducted the training on the knowledge subjects; and
- (ii) Certifies that the person is prepared for the required knowledge test; and
- (2) Pass the required written knowledge test on the knowledge areas specified in paragraph 2.3.7.1 (c) of this part.

Note: Depending upon the particular MPL(A) curriculum, the knowledge test for the MPL(A) may need to be an integrated test in that it contains elements of PPL, CPL, IR, and/or ATPL knowledge

- (e) EXPERIENCE AND FLIGHT INSTRUCTION. The applicant for an MPL(A) shall have completed the experience and flight instruction requirements appropriate to the aircraft category as specified in this Part.
- (f) SKILL. The applicant for an MPL(A) shall demonstrate the skills required for fulfilling all the required competency units in the CAA STSs for MPL(A) as pilot flying and pilot not flying, to the level required to perform as a CP of turbine-powered aeroplanes certificated for operation with a minimum crew of at least two pilots under VFR and IFR, and have been continuously assessed in the training progress of acquiring the following skills:
  - (1) Recognize and manage threats and errors
  - (2) 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;
  - (3) Operate the aeroplane in the mode of automation appropriate to the phase of flight and to maintain awareness of the active mode of automation;
  - (4) Perform, in an accurate manner, normal, abnormal and emergency procedures in all phases of flight; and
  - (5) 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 SOPs and use of checklists.
- (g) PRIVILEGES. The privileges of the holder of an MPL(A) shall be as follows:
  - (1) Subject to compliance with the requirements specified in this Part, the privileges of the holder of an MPL(A) shall be:
    - To exercise all the privileges of the holder of a PPL in the aeroplane category provided the private pilot experience requirements of 2.3.4.2 of this part have been met;
    - (ii) To exercise the privileges of the IR in a multi-crew operation; and
    - (iii) To act as CP of an aeroplane required to be operated with a CP.
  - (2) Before exercising the privileges of the IR in a single-pilot operation in aeroplanes, the license holder shall have demonstrated an ability to act as PIC in a single-pilot operation exercised by reference solely to instruments and shall have met the IR skill requirement specified in 2.3.8.2 of this part appropriate to the aeroplane category.
  - (3) Before exercising the privileges of a CPL in a single-pilot operation in aeroplanes, the license holder shall have:
    - (i) Completed in aeroplanes 70 hours, either as PIC, or made up of not less than 10 hours as PIC and the necessary additional flight time as PIC under supervision;
    - (ii) Completed 20 hours of cross-country flight time as PIC, or made up of not less than 10 hours as PIC and 10 hours as PIC under supervision, including a crosscountry flight totaling not less than 540 km (300 NM) in the course of which fullstop landings at two different aerodromes shall be made; and
    - (iii) Met the requirements for the CPL specified in paragraphs 2.3.5.1 (c), 2.3.5.1 (f), and 2.3.5.2 (a)(2) of this part (with the exception of 2.3.5.2(a)(2)(i)) appropriate to the aeroplane category.

Note 1: When a Contracting State grants single-pilot operation privileges to the holder of an MPL(A), it can document the privileges through an endorsement of the MPL(A) or through the issuance of a CPL in the aeroplane category.

- (h) Note 2: Certain privileges of the license are curtailed by license holders when they reach their 65th birthday. VALIDITY. Subject to compliance with the requirements specified in this Part, the validity period of the license is 5 years.
- (i) RENEWAL. An MPL(A) that has not expired may be renewed for an additional five years if the holder presents to the Authority satisfactory evidence that the license, medical certificate, and recency of experience are current.
- (j) REISSUE. If the MPL(A) has expired, the applicant shall have received refresher training acceptable to the Authority and shall pass the PML(A) skill test specified in the CAA STSs for MPL(A).

#### 2.3.6.2 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE MULTI-CREW PILOT LICENSE— AEROPLANE CATEGORY

- (a) EXPERIENCE. The applicant for an MPL(A) shall have completed in an approved training course not less than 240 hours as pilot flying and pilot not flying of actual and simulated flight.
  - (1) The flight experience in actual flight shall include at least the experience for a PPL(A) at 2.3.4.2 of this part, upset prevention and recovery training, night flying, and flight by reference solely to instruments.
  - (2) In addition to meeting the provisions of paragraph 2.3.6.2(a)(1) of this subsection, the applicant shall have gained, in a turbine-powered aeroplane certificated for operations with a minimum crew of at least two pilots, or in an FSTD approved for that purpose by the Authority, the experience necessary to achieve the advance level of competency defined in the CAA STSs for MPL(A).
- (b) FLIGHT INSTRUCTION. The applicant for an MPL(A) shall have received dual flight instruction in all the competency units specified in the CAA STSs for MPL(A) to the level required for the issue of the MPL, to include the competency units required to pilot under IFR.
- (c) SKILL TEST. The requirements for the skill test for MPL(A) are included in the CAA STSs for MPL(A).

Note: The aeroplane upset prevention and recovery training may be integrated in the type rating programme or may be conducted immediately after, as an additional module.

## 2.3.7 AIRLINE TRANSPORT PILOT LICENSE

#### 2.3.7.1 GENERAL REQUIREMENTS

- (a) AGE. The applicant for an ATPL shall be at least 21 years of age.
- (b) MEDICAL FITNESS. The applicant for an ATPL shall hold a current Class 1 Medical Certificate issued under this Part.
- (c) KNOWLEDGE. The applicant for an ATPL shall have received and logged ground training from an authorized instructor on the following subjects appropriate to the privileges of the ATPL and to the category of aircraft intended to be included on the license:
  - (1) AIR LAW:
    - (i) Rules and regulations relevant to the holder of an ATPL, rules of the air, appropriate ATS practices and procedures;
  - (2) AIRCRAFT GENERAL KNOWLEDGE:
    - General characteristics and limitations of electrical, hydraulic, pressurization and other aircraft systems, flight control systems, including autopilot and stability augmentation;

- 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;
- Operating procedures and limitations of appropriate aircraft, effects of atmospheric conditions on aircraft performance in accordance to the relevant operational information from the flight manual;
- (iv) Use and serviceability checks of equipment and systems of the relevant category of aircraft;
- 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;
- Maintenance procedures for airframes, systems and powerplants of appropriate aircraft;
- (vii) For helicopter and powered-lift, transmission (power-trains), where applicable;
- (3) FLIGHT PERFORMANCE, PLANNING AND LOADING:
  - (i) Effects of loading and mass distribution on aircraft handling, flight characteristics and performance, mass and balance calculations;
  - (ii) Use and practical application of take-off, landing and other performance data, including procedures for cruise control;
  - (iii) Pre-flight and en-route operational flight planning, preparation and filing of ATS flight plans, appropriate ATS procedures, altimeter setting procedures;
  - (iv) In the case of helicopter or powered-lift, effects of external loading on handling;
- (4) HUMAN PERFORMANCE:
  - (i) Human performance including principles of threat and error management;
- (5) METEOROLOGY:
  - 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;
  - 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;
  - (iii) Causes, recognition and effects of icing, frontal zone penetration procedures, hazardous weather avoidance;
  - (iv) In the case of aeroplane and powered-lift, practical high-altitude meteorology, including interpretation and use of weather reports, charts and forecasts, jetstreams;
- (6) NAVIGATION:
  - Air navigation, including the use of aeronautical charts, radio navigation aids and area navigation systems, specific navigation requirements for long-range flights;
  - (ii) Use, limitation and serviceability of avionics and instruments necessary for the control and navigation of aircraft;
  - (iii) Use, accuracy and reliability of navigation systems used in departure, en-route, approach and landing phases of flight, identification of radio navigation aids;
  - Principles and characteristics of self-contained and external-referenced navigation systems, operation of airborne equipment;

## (7) OPERATIONAL PROCEDURES:

- (i) Application of threat and error management to operational performance;
- (ii) Interpretation and use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;
- (iii) Precautionary and emergency procedures, safety practices;
- (iv) Operational procedures for carriage of freight and dangerous goods;
- Requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from aircraft;
- In the case of helicopter, and if applicable, powered-lift, settling with power; ground resonance, retreating blade stall, dynamic roll-over and other operating hazards, safety procedures, associated with flight under VMC;
- (8) PRINCIPLES OF FLIGHT:
  - (i) Principles of flight relating to the appropriate aircraft category; and
- (9) RT
  - (i) RT procedures and phraseology, action to be taken in case of communication failure;
- (d) KNOWLEDGE TESTING. The applicant for an ATPL shall:
  - (1) Have received an endorsement for the knowledge test from an authorized instructor who:
    - (i) Conducted the training on the knowledge subjects; and
    - (ii) Certifies that the person is prepared for the required knowledge test; and
  - (2) Pass the required written knowledge test on the knowledge subjects listed in paragraph 2.3.7.1(c) (2) of this subsection.
- (e) EXPERIENCE AND FLIGHT INSTRUCTION. The applicant for an ATPL shall have completed the experience and flight instruction requirements appropriate to the aircraft category as specified in this part.
- (f) SKILL. The applicant for an ATPL shall have:
  - (1) Received an endorsement from an authorized instructor who certifies that the person is prepared for the required skill test; and
  - (2) Demonstrated by passing a skill test the ability to perform, as PIC of an aircraft of the appropriate category required to be operated with a CP, the following procedures and manoeuvres:
    - (i) Pre-flight procedures, including the preparation of the operational flight plan and filing of the ATS flight plan;
    - (ii) Normal flight procedures and manoeuvres during all phases of flight;
    - (iii) Abnormal and emergency procedures and manoeuvres related to failures and malfunctions of equipment, such as powerplant, systems and airframe;
    - (iv) Procedures for crew incapacitation and crew coordination, including allocation of pilot tasks, crew cooperation and use of checklists; and
    - (v) In the case of the aeroplane and powered-lift, procedures and manoeuvres for instrument flight as described in 2.3.7 of this part, including simulated engine failure; and
    - (vi) In the case of aeroplane, the applicant shall have demonstrated the ability to perform the procedures and manoeuvres described in this paragraph as PIC in a multi-engine aircraft.

- (3) Demonstrated by passing a skill test, the ability to perform the areas of operation described in the applicable CAA STSs, with a degree of competency appropriate to the privileges granted to the holder of an ATPL, and to:
  - (i) Operate the aeroplane within its limitations;
  - (ii) Recognize and manage threats and errors;
  - (iii) 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;
  - (iv) Operate the aircraft in the mode of automation appropriate to the phase of flight and to maintain awareness of the active mode of automation;
  - (v) Perform, in an accurate manner, normal, abnormal and emergency procedures in all phases of flight;
  - (vi) Exercise good judgment and airmanship, to include structured decision making and the maintenance of situational awareness; and
  - (vii) Communicate effectively with the other flight crewmembers and demonstrate the ability to effectively perform procedures for crew incapacitation, crew coordination, including allocation of pilot tasks, crew cooperation, adherence to SOPs and use of checklists.
- (g) PRIVILEGES. Subject to compliance with the requirements specified in this Part, the privileges of the holder of an ATPL shall be:
  - (1) To exercise all the privileges of the holder of a PPL and CPL in an aircraft within the appropriate aircraft category and class, if applicable;
  - (2) In the case of the aeroplane and powered-lift categories, to exercise the privileges of the holder of an IR; and
  - (3) To act as PIC and CP in commercial air transportation, of an aircraft within the appropriate category, and class if applicable.
- (h) VALIDITY. Subject to compliance with the requirements specified in this Part, the validity period of the license is 5 years. For renewal or reissue, see 2.2.1.7 of this part.
- (i) RENEWAL. An ATPL that has not expired may be renewed for an additional five years if the holder presents to the Authority satisfactory evidence that the license, medical certificate, and recency of experience and proficiency are current.
- (j) REISSUE. If the ATPL has expired, the applicant shall have received refresher training acceptable to the Authority and shall pass the airline transport pilot skill test.

#### 2.3.7.2 EXPERIENCE, FLIGHT INSTRUCTION AND SKILL TEST FOR THE ATPL—AEROPLANE CATEGORY

- (a) EXPERIENCE.
  - (1) The applicant for an ATPL (A) shall have completed not less than 1500 hours of flight time as a pilot of aeroplanes of which a maximum of 100 hours may have been completed in a FSTD. The applicant shall have completed in aeroplanes not less than:
    - (i) 250 hours, either as PIC, or made up by not less than 100 hours as PIC and the necessary additional flight time as CP performing, under the supervision of the PIC, the duties and functions of a PIC, provided that the method of supervision employed is acceptable to the Authority;
    - (ii) 200 hours of cross-country flight time, of which not less than 100 hours shall be as PIC or as CP performing, under the supervision of the PIC, the duties and functions of a PIC, provided that the method of supervision employed is acceptable to the Authority;

- (iii) 75 hours of instrument time, of which not more than 30 hours may be instrument ground time; and
- (iv) 100 hours of night flight as PIC or as CP.
- (2) Holders of a CPL(H) will be credited with 50% of their helicopter flight time as PIC towards the flight time required in paragraph 2.3.7.2(a)(1).
- (3) The applicant for an ATPL(A) shall be the holder of a CPL(A) with instrument and multiengine rating issued under this Part.
- (b) FLIGHT INSTRUCTION. The applicant for an ATPL(A) shall have received the dual flight instruction required for the issue of the CPL and the IR.
- (c) Skill test. The requirements for the skill test for ATPL(A) are included in the CAA STSs for ATPL(A).

Note: The aeroplane upset prevention and recovery training may be integrated in the type rating programme or may be conducted immediately after, as an additional module.

#### 2.3.7.3 EXPERIENCE, FLIGHT INSTRUCTION AND SKILL TEST FOR THE ATPL—HELICOPTER CATEGORY

- (a) EXPERIENCE.
  - (1) The applicant for an ATPL (H) shall have completed not less than 1000 hours of flight time as a pilot of helicopters of which a maximum of 100 hours may have been completed in an FSTD. The applicant shall have completed in helicopters not less than:
    - (i) 250 hours, either as PIC, or made up by not less than 100 hours as PIC and the necessary additional flight time as CP performing, under the supervision of the PIC, the duties and functions of a PIC, provided that the method of supervision employed is acceptable to the Authority;
    - (ii) 200 hours of cross-country flight time, of which not less than 100 hours shall be as PIC or as CP performing, under the supervision of the PIC, the duties and functions of a PIC, provided that the method of supervision employed is acceptable to the Authority;
    - (iii) 30 hours of instrument time, of which not more than 10 hours may be instrument ground time; and
    - (iv) 50 hours of night flight as PIC or CP.
  - (2) Holders of a CPL(A) will be credited with 50 percent of their aeroplane flight time as PIC towards the flight time required in 2.3.7.3(a)(1) of this subsection).
  - (3) The applicant for an ATPL(H) shall be the holder of a CPL(H) issued under this Part.
- (b) FLIGHT INSTRUCTION. The applicant for an ATPL(H) shall have received the dual flight instruction required for the issue of the CPL.
- (c) SKILL TEST. The requirement for the skill test for the ATPL(H) are included in the STSs for ATPL(H).

## 2.3.7.4 EXPERIENCE, FLIGHT INSTRUCTION AND SKILL TEST FOR THE ATPL—POWERED-LIFT CATEGORY

- (a) EXPERIENCE.
  - (1) The applicant for an ATPL(PL) shall have completed not less than 1500 hours of flight time as a pilot of powered-lift. The Authority may determine whether experience completed under instruction in an FSTD is acceptable as part of the total time of 1500 hours. The applicant shall have completed in powered-lift not less than:
    - (i) 250 hours, either as PIC, or made up by not less than 100 hours as PIC and the necessary additional flight time as CP performing, under the supervision of the PIC, the duties and functions of PIC, provided that the method of supervision employed is acceptable to the Authority.

- (ii) 100 hours of cross-country flight time, of which not less than 50 hours shall be as PIC or as CP performing under the supervision of the PIC, the duties and functions of a PIC, provided that the method of supervision employed is acceptable to the Authority.
- (iii) 75 hours of instrument time, of which not more than 30 hours may be instrument ground time.
- (iv) 25 hours of night flight as PIC or CP.
- (2) The Authority may determine if pilot flight time in other aircraft categories may be credited toward meeting the 1500-hour flight time in paragraph 2.3.7.4(a) (1) of this subsection.
- (3) The applicant for an ATPL(PL) shall be the holder of a CPL (PL) issued under this Part.
- (b) FLIGHT INSTRUCTION. The applicant for an ATPL (PL) shall have received the dual flight instruction required for the issue of the CPL(PL) and for the issue of the (IR).
- (c) SKILL TEST. The requirements for the skill test for ATP(PL) are included in the CAA STS for ATPL(PL).

#### 2.3.8 INSTRUMENT RATING

#### 2.3.8.1 GENERAL REQUIREMENTS

- (a) AGE. The applicant for an IR shall be at least 17 year of age.
- (b) MEDICAL FITNESS. The applicant for an IR shall hold either a Class 1 or 2 medical certificate issued under this Part, as appropriate for the level of license held. The applicant for an IR holding a PPL shall have established the applicant's hearing acuity on the basis of compliance with the hearing requirements for the issue of a Class 1 Medical Certificate.
- (c) KNOWLEDGE. The applicant for an IR shall receive and log ground training from an authorized instructor on the following subjects:
  - (1) AIR LAW:
    - (i) Rules and regulations relevant to flight under IFR, related ATS practices and procedures.
  - (2) AIRCRAFT GENERAL KNOWLEDGE FOR THE AIRCRAFT CATEGORY BEING SOUGHT:
    - Use, limitation and serviceability of avionics, electronic devices and instruments necessary for the control and navigation of aeroplanes under IFR and in instrument meteorological conditions; use and limitations of autopilot.
    - Compasses, turning and acceleration errors, gyroscopic instruments, operational limits and precession effects, practices and procedures in the event of malfunctions of various flight instruments.
  - (3) FLIGHT PERFORMANCE AND PLANNING FOR THE AIRCRAFT CATEGORY BEING SOUGHT:
    - (i) Pre-flight preparations and checks appropriate to flight under IFR.
    - (ii) Operational flight planning, preparation and filing of ATS flight plans under IFR, altimeter setting procedures.
  - (4) HUMAN PERFORMANCE FOR THE AIRCRAFT CATEGORY BEING SOUGHT:
    - (i) Human performance relevant to instrument flight in aircraft.
    - (ii) Principles of threat and error management.
  - (5) METEOROLOGY FOR THE AIRCRAFT CATEGORY BEING SOUGHT:

- Application of aeronautical meteorology, interpretation and use of reports, charts and forecasts, codes and abbreviations, use of, and procedures for obtaining, meteorological information; altimetry.
- (ii) Causes, recognition and effects of icing, frontal zone penetration procedures, hazardous weather avoidance.
- (iii) In the case of helicopter and powered-lift, effects of rotor icing.
- (6) NAVIGATION FOR THE AIRCRAFT CATEGORY BEING SOUGHT.
  - (i) Practical air navigation using radio navigation aids.
  - (ii) Use, accuracy and reliability of navigation systems used in departure, en-route, approach and landing phases of flight; identification of radio navigation aids.
- (7) OPERATIONAL PROCEDURES FOR THE AIRCRAFT CATEGORY BEING SOUGHT:
  - (i) Application of threat and error management to operational principles.
  - 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.
  - (iii) Precautionary and emergency procedures, safety practices associated with flight under IFR, obstacle clearance criteria.
- (8) RT.
  - (i) Communication procedures and phraseology as applied to aircraft operations under IFR, action to be taken in case of communication failure.
- (9) KNOWLEDGE TESTING. An applicant for an IR shall:
- (1) Have received an endorsement for the knowledge test from an authorized instructor who:
  - (A) Conducted the training on the knowledge subjects; and
  - (B) Certifies that the person is prepared for the required knowledge test; and
- (2) Pass the required knowledge test on the knowledge subjects listed in paragraph 2.3.8.1(c) of this subsection.
- (d) EXPERIENCE AND FLIGHT INSTRUCTION. An applicant for an IR shall have completed the experience and flight instruction requirements appropriate to the aircraft category as specified in this Part.
- (e) PRIVILEGES. Subject to compliance with the requirements specified in this Part, the privileges of the holder of an IR shall be to pilot an aircraft of the appropriate category under IFR. Before exercising the privileges on multi-engine aircraft, the holder of the rating shall have complied with the requirements of (g)(3).
- (f) VALIDITY. Subject to compliance with the requirements specified in this Part, the validity period of an IR is 1 year.
- (g) RENEWAL:
  - (1) For the renewal of a single-engine IR, the applicant shall within the preceding 12 calendar months, complete a proficiency check on the subjects listed in the CAA STSs for the IR.
  - (2) For the renewal of a multi-engine IR the applicant shall within the preceding 12 calendar months, complete a proficiency check on the subjects listed in the CAA STSs for the IR.
  - (3) If a pilot takes the proficiency check required in this section in the calendar month before or the calendar month after the month in which it is due, the pilot is considered to have taken it in the month in which it was due for the purpose of computing when the next proficiency check is due.
- (h) Re-issue. If the IR has expired, the applicant shall:

- (1) Have received refresher training from an authorized instructor with an endorsement that the person is prepared for the required skill test; and
- (2) Pass the required skill test on the subjects listed in the CAA STSs for the IR.

Note: The IR is included in the ATPL(A), ATPL(PL), MPL, and the CPL(AS). An Authority may combine the IR requirements with other

## 2.3.8.2 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE INSTRUMENT RATING

- (a) EXPERIENCE.
  - (1) The applicant for an IR shall hold a pilot license with an aircraft category and, if applicable, a class rating for the IR sought.
  - (2) The applicant shall have completed not less than:
    - 50 hours of cross-country flight time as PIC of aircraft in categories acceptable to the Authority, of which not less than 10 hours shall be in the aircraft category being sought; and
    - (ii) 40 hours of instrument time in aircraft of which not more than 20 hours, or 30 hours where an FSTD is used, may be instrument ground time. The ground time shall be under the supervision of an authorized instructor.
- (b) FLIGHT INSTRUCTION.
  - (1) The applicant for an IR shall have not less than 10 hours of the instrument flight time required in paragraph 2.3.8.2(a)(2)(ii) of this subsection while receiving and logging dual instruction in aircraft from an authorized FI.
  - (2) 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 IR:
    - (i) Pre-flight procedures, including the use of the flight manual or equivalent document, and appropriate ATS documents in the preparation of an IFR flight plan.
    - (ii) Pre-flight inspection, use of checklists, taxiing and pre-take-off checks.
    - (iii) Procedures and manoeuvres for IFR operation under normal, abnormal and emergency conditions covering at least:
      - (A) Transition to instrument flight on take-off;
      - (B) Standard instrument departures and arrivals;
      - (C) En-route IFR procedures and navigation;
      - (D) Holding procedures;
      - (E) Instrument approaches to specified minima;
      - (F) Missed approach procedures; and
      - (G) Landings from instrument approaches;
      - (iv) In flight manoeuvres and particular flight characteristics.
  - (3) If the privileges of the IR are to be exercised on multi-engine aircraft, the applicant shall have received dual instrument flight instruction in such an aircraft from an authorized FI. The instructor shall ensure that the applicant has operational experience in the operation of the aircraft solely by reference to instruments with one engine inoperative or simulated inoperative.
- (c) SKILL. The applicant for an IR shall have:
  - (1) Received an endorsement from an authorized instructor who certifies that the person is prepared for the required skill test.

- (2) Demonstrated by passing a skill test the ability to perform the areas of operation described in the CAA STSs for IR with a degree of competency appropriate to the privileges granted to the holder of an IR and to:
  - (i) Recognize and manage threats and errors;
  - (ii) Operate the aircraft within its limitations;
  - (iii) Complete all manoeuvres with smoothness and accuracy;
  - (iv) Exercise good judgment and airmanship;
  - (v) Apply aeronautical knowledge;
  - (vi) Maintain control of the aircraft at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured;
  - (vii) Understand and apply crew coordination and incapacitation procedures; and
  - (viii) Communicate effectively with the other flight crewmembers.
- (3) Demonstrated by passing a skill test the ability to operate multi-engine aircraft solely by reference to instruments with one engine inoperative, or simulated inoperative, described in the CAA STSs for IR, if the privileges of the IR are to be exercised on such aircraft.
- (d) The skill test and proficiency check for the IR is included in the CAA STSs for the IR.

#### 2.3.9 INSTRUCTORS FOR PILOT LICENSING

#### 2.3.9.1 GENERAL REQUIREMENTS

- (a) APPLICABILITY.
  - (1) This section prescribes the requirements for the issuance of instructor licenses, ratings or authorizations, the conditions under which those ratings and authorizations are necessary, and the privileges and limitations on those ratings and authorizations.
  - (2) All instructors shall read, speak, write and understand the English language as required.
  - (3) The following instructor licenses, ratings and authorizations are issued under this part:
    - (i) FI license;
    - (ii) GI license, with basic, advanced and instrument ratings; and
    - (iii) Instructor Authorization for flight simulation training.

#### 2.3.9.2 FIIGHT LICENSE REQUIREMENTS, SKILL TEST AND PROFICIENCY CHECK

- (a) AGE. The applicant for a FI license shall be of the appropriate age for the underlying license to be held.
- (b) MEDICAL FITNESS. The applicant for an FI license shall have a Class 1 medical certificate.
- (c) KNOWLEDGE. The applicant for an FI license shall:
  - (1) Have received and logged training from an authorized instructor;
  - (2) Pass an FI knowledge test on:
    - (i) The aeronautical knowledge areas for a student pilot authorization, private, commercial and airline transport pilot licenses applicable to the aircraft category for which FI privileges are sought; and
    - (ii) The aeronautical knowledge areas for the IR applicable to the category for which instrument FI privileges are sought.
  - (3) Meet the requirements for fundamentals of knowledge instruction as listed in 2.2.6 of this part.

- (d) EXPERIENCE. The applicant for an FI license shall hold a license with the aircraft category, and if applicable class and/or type rating, that is appropriate to the FI rating sought as follows:
  - (1) For an instructor license in the aeroplane category hold either a CPL(A) or an ATPL(A) with IR and appropriate class and/or type ratings;
  - (2) For an instructor license in the powered-lift category hold either a CPL(PL) or an ATPL (PL) with IR and, as applicable, class or type rating;
  - (3) For an instructor license in the helicopter category hold either a CPL(H) or an ATPL(H) helicopter category and any applicable class or type rating;
  - (4) For an instructor IR license hold an IR in the appropriate category of aircraft.
- (e) FLIGHT INSTRUCTION. The applicant for an FI license shall have:
  - (1) Receive flight instruction from an authorized instructor in flight instructional techniques including demonstration, student practices, recognition and correction of common student errors; and
  - (2) Practiced instructional techniques in those flight manoeuvres and procedures in which it is intended to provide flight instruction.
- (f) SKILL. The applicant for an FI license shall:
  - Receive a logbook endorsement from an authorized instructor to indicate that the applicant is proficient on the areas of operation listed in paragraph 2.3.9.2(f)(2) of this subsection, appropriate to the FI rating sought;
  - (2) Pass the required skill test that is appropriate to the FI license sought on the areas of operation described to the applicable CAA STSs in an:
    - (i) Aircraft that is representative of the category of aircraft, and if applicable class and/or type, for the aircraft rating sought; or
    - (ii) Approved FSTD that is representative of the category, and if applicable class and/or type of aircraft for the license and rating sought, and used in accordance with an approved course at an ATO certificated under Part 3 of these regulations.
- (g) PRIVILEGES, LIMITATIONS AND QUALIFICATIONS.
  - (1) A FI is authorized within the limitations of that person's FI license, and pilot license and ratings, to give training and endorsements that are required for, and relate to:
    - (i) A student pilot authorization;
    - (ii) A pilot license;
    - (iii) An FI license;
    - (iv) A GI license;
    - (v) An aircraft category rating;
    - (vi) An aircraft class rating;
    - (vii) An IR;
    - (viii) A proficiency check or recency of experience requirement;
    - (ix) A knowledge test; and
    - (x) A skill test.
- (h) VALIDITY. Subject to compliance with the requirements specified in this Part, the validity period of instructor license is 2 years.
- (i) RENEWAL. An FI license that has not expired may be renewed for an additional 24 calendar months if the holder:
  - (1) Passes a skill test for:

- (i) Renewal of the FI license; or
- (ii) An additional FI rating; or
- (2) Presents to an Authority inspector:
  - A record of training students showing that, during the preceding 24 calendar months, the FI has endorsed at least five students for a skill test for a license or rating, and at least 80 percent of those students passed that test on the first attempt;
  - A record showing that, within the preceding 24 calendar months, the FI has served as a company check pilot, Chief Flight Instructor, company CP, or FI in an operation certificated under Part 9 of these regulations, or in a position involving the regular evaluation of pilots; or
  - (iii) A graduation certificate showing that the FI has successfully completed an approved FI refresher course consisting of ground training or flight training, or both, within the 90 days preceding the expiration month of the FI license.
- (3) If an FI accomplishes the renewal requirements within the 90 days preceding the expiration month of the FI license:
  - (i) The Authority will consider that the FI accomplished the renewal requirement in the month due; and
  - (ii) The Authority will renew the current FI rating for an additional 24 calendar months from its expiration date.
- (4) An FI may accomplish the skill test required by this subsection in an approved course conducted by an ATO certificated under Part 3 of these regulations.
- (j) REISSUE. If the FI license has expired, the applicant shall:
  - (1) Have received refresher training from an authorized instructor with an endorsement that the person is prepared for the required skill test; and
  - (2) Pass the prescribed skill test.
- (k) ADDITIONAL FI LICENSES. An applicant for an additional FI license shall meet the requirements listed in 2.3.9.2 of this subsection that apply to the FI rating sought.
- (I) FI RECORDS. A FI shall:
  - (1) Sign the logbook of each person to whom that instructor has given flight training or ground training.
  - (2) Maintain a record in a logbook or separate document that contains the following:
    - (i) The name of each person whose logbook or student pilot license that instructor has endorsed for solo flight privileges, and the date of the endorsement; and
    - (ii) The name of each person that instructor has endorsed for a knowledge test or skill test, and a record of the kind of test, the date, and the results.
  - (3) Retain the records required by this subjection for at least 3 years.
- (m) FI LIMITATIONS AND QUALIFICATIONS. The holder of an FI license shall observe the following limitations and qualifications.
  - (1) Hours of training. In any 24-consecutive-hour period, an FI may not conduct more than 8 hours of flight training.
  - (2) Required license and ratings. A FI may not conduct flight training in any aircraft for which the FI does not hold a pilot license and FI license with the applicable category and if applicable class or type rating.
  - (3) For instrument flight training or for training for a type rating not limited to VFR, an appropriate IR on the holder's FI rating and pilot license.

- (4) Limitations on endorsements. An FI may not endorse the following:
  - (i) A student pilot's license or logbook for solo flight privileges, unless that FI has:
    - (A) Given that student the flight training required for solo flight privileges required by this subsection;
    - (B) Determined that the student is prepared to conduct the flight safely under known circumstances, subject to any limitations listed in the student's logbook that the instructor considers necessary for the safety of the flight;
    - (C) Given that student pilot training in the make and model of aircraft or a similar make and model of aircraft in which the solo flight is to be flown; and
    - (D) Endorsed the student pilot's logbook for the specific make and model of aircraft to be flown.
  - (ii) A student pilot's license and logbook for a solo cross country flight, unless that FI has determined that:
    - (A) The student's flight preparation, planning, equipment, and proposed procedures are adequate for the proposed flight under the existing conditions and within any limitations listed in the logbook that the instructor considers necessary for the safety of the flight; and
    - (B) The student has the appropriate solo cross country endorsement for the make and model of aircraft to be flown.

Note: Class B airspace as defined in ICAO Annex 11: 2.6.1 is IFR and VFR flights are permitted, all flights are provided with air traffic control service and are separated from each other.

- (iii) A student pilot's license and logbook for solo flight in a Class B airspace area or at an airport within Class B airspace unless that FI has:
  - (A) Given that student ground and flight training in that Class B airspace or at that airport; and
  - (B) Determined that the student is proficient to operate the aircraft safely.

Note: Class B airspace as defined in ICAO Annex 11: 2.6.1 is IFR and VFR flights are permitted, all flights are provided with air traffic control service and are separated from each other.

- (iv) The logbook of a pilot for a flight review, unless that instructor has conducted a review of that pilot in accordance with the requirements of 8.4.1.10 of these regulations; or
- (v) The logbook of a pilot for an instrument proficiency check, unless that instructor has tested that pilot in accordance with the requirements of 8.4.1.11 of these regulations.
- (5) Training in a multiengine aeroplane or a helicopter. An FI may not give training required for the issuance of a license or rating in a multiengine aeroplane or a helicopter, unless that FI has at least 5 flight hours of PIC time in the specific make and model of multiengine aeroplane or helicopter, as appropriate.
- (6) Qualifications of the FI for training first-time FI applicants.
  - (i) No FI may provide instruction to another pilot who has never held a FI license unless that FI:
    - (A) Holds a current ground or FI license with the appropriate rating, has held that license for at least 24 months, and has given at least 40 hours of ground training; or

- (B) Holds a current ground or FI license with the appropriate rating, and has given at least 100 hours of ground training in a course which has been approved by the Authority; and
- (C) Meets the eligibility requirements prescribed in 2.2.6 of this part;
- (D) For training in preparation for an aeroplane or helicopter rating, has given at least 200 hours of flight training as a FI.
- (7) Prohibition against self-endorsements. A FI may not make any self-endorsement for a license, rating, flight review, authorization, operating privilege, skill test, or knowledge test that is required by this part.
- (8) CAT II and CAT III instructions: An FI may not give training in CAT II or CAT III operations unless the FI has been trained and tested in CAT II or CAT III operations as applicable.
- (n) The skill test and proficiency check for FI ratings in the categories of aeroplane, helicopter, powered-lift and airship, as well as IR (aeroplane, helicopter, and powered-lift) and additional type ratings are included in the applicable CAA STSs.

#### 2.3.9.3 INSTRUCTOR AUTHORIZATION FOR FLIGHT SIMULATION TRAINING

- (a) Current and former holders of professional pilot licenses, having instructional experience can apply for an authorization to provide flight instruction in an FSTD, provided the applicant has at least 1 year experience as an instructor in FSTDs.
  - (1) SKILL. The applicant shall have demonstrated in a skill test, in the category and in the class or type of aircraft for which instructor authorization privileges are sought, the ability to instruct in those areas in which ground instruction is to be given.
  - (2) PRIVILEGES. Subject to compliance with the requirements specified in this Part, the privileges of the holder of an authorization are to carry out instruction in an FSTD for the issue of a class or type rating in the appropriate category of aircraft.
  - (3) VALIDITY. Subject to compliance with the requirements specified in this Part, the validity period of an instructor authorization for flight simulation training is 1 year.
  - (4) RENEWAL. Renewal of the authorization requires the successful completion of a proficiency check.
  - (5) REISSUE. If the authorization has expired, the applicant shall complete refresher training and successfully pass a skill test in the category and class or type of aircraft for which instructor authorization privileges are sought.

#### 2.3.9.4 GROUND INSTRUCTOR LICENSE

- (a) AGE. The applicant for a GI license shall be at least 18 years of age.
- (b) KNOWLEDGE. The applicant for a GI license shall:
  - (1) Receive and log training from an authorized instructor and pass a knowledge test on the aeronautical knowledge areas appropriate to the aircraft category, for the license and ratings below as applicable:
    - (i) For a BGI rating, the knowledge for a student and PPL as listed in this part;
    - (ii) For an AGI rating, the student, private, commercial and airline transport pilot knowledge areas as listed in this part; and
    - (iii) For an IGI rating, the knowledge for the IR as listed in this part.
  - (2) Meet the requirements for fundamentals of instructing as listed in 2.2.6 of this part.

- (c) PRIVILEGES. The holder of a GI license may exercise the privileges appropriate to the license and rating held.
  - (1) A person who holds a GI license with a basic rating is authorized to provide:
    - (i) Ground training in the aeronautical knowledge areas required for the issuance of a student pilot authorization or PPL or associated ratings;
    - (ii) Ground training required for a private pilot flight review; and
    - (iii) A recommendation for a knowledge test required for the issuance of a PPL.
  - (2) A person who holds a GI license with an advanced rating is authorized to provide:
    - (i) Ground training in the aeronautical knowledge areas required for the issuance of any license or rating;
    - (ii) Ground training required for any flight review; and
    - (iii) A recommendation for a knowledge test required for the issuance of any license.
  - (3) A person who holds an IGI rating is authorized to provide:
    - Ground training in the aeronautical knowledge areas required for the issuance of an IR;
    - (ii) Ground training required for an instrument proficiency check; and
    - (iii) A recommendation for a knowledge test required for the issuance of an IR.
  - (4) A person who holds a GI license is authorized, within the limitations of the license and ratings on the GI license, to endorse the logbook or other training record of a person to whom the holder has provided the training or recommendation specified in paragraphs 2.3.9.4(c)(1) through (3) of this subsection.
- (d) VALIDITY. The validity period for a GI license is 1 year.
- (e) RENEWAL. The applicant for renewal of a GI license shall provide to the Authority satisfactory evidence of at least 3 months of service as a GI within the past 12 months.
- (f) REISSUE. If the GI license has expired, the applicant for reissuance must complete refresher training acceptable to the Authority and shall receive an endorsement from a licensed ground or flight instructor certifying that the person has demonstrated satisfactory proficiency with the standards prescribed in this part for the license and rating.

#### 2.3.10 DESIGNATED PILOT EXAMINERS

#### 2.3.10.1 REQUIREMENTS AND SKILL TEST FOR A DESIGNATED PILOT EXAMINER

- (a) AGE. The applicant for a DPE shall be at least 21 years of age.
- (b) MEDICAL. The applicant for a DPE shall have a Class 1 medical certificate.
- (c) GENERAL ELIGIBILITY. The applicant for a DPE shall:
  - (1) Hold at least the license and/or the class/type ratings as applicable for which examining authority is sought;
  - (2) Hold at least the FI ratings for which examining authority is sought or be serving in a comparable position as an air operator check pilot or comparable position in an ATO;
  - (3) Have a reputation for integrity and dependability in the industry and the community;
  - (4) Have a good record as a pilot and FI with regard to accidents, incidents, and violations; and
  - (5) Have pilot and instructor license/ratings that have never been revoked for falsification or forgery.

- (d) KNOWLEDGE: The applicant for a DPE shall pass a pre-designation knowledge test in the areas appropriate to the category of aircraft for which designation is sought.
- (e) SKILL TEST. The applicant for a DPE shall pass a skill test conducted by an inspector of the Authority who holds a current and valid license with the appropriate category and, if applicable, class and type ratings on the areas of operation contained in the CAA STSs for the applicable designation.
- (f) MAINTAINING CURRENCY. After designation, a DPE shall maintain currency by:
  - (1) Attending initial and recurrent training provided by the Authority, and
  - (2) Maintaining a current and valid:
    - (i) Pilot license, and if applicable, class/type ratings appropriate to the designation;
    - (ii) FI license and ratings applicable to the designation; and
    - (iii) Class 1 medical certificate.
- (g) PRIVILEGES. Subject to compliance with the requirements specified in this Part, the privileges of the examiner's designation are to conduct skill tests and proficiency checks for a license and rating(s) as listed on the DPE's certificate of designation and identification card.
- (h) VALIDITY. Subject to compliance with the requirements specified in this Part, the validity period of an examiner's designation is 3 years.
- (i) RENEWAL.
  - (1) Renewal will be at the discretion of the Authority.
  - (2) An applicant for renewal shall pass the appropriate skill test on the areas of operation listed in the CAA STSs for the applicable designation.
- (j) ADDITIONAL DESIGNATIONS. When the Authority deems it necessary for a DPE to receive additional designations, the DPE:
  - (1) Shall meet all the requirements in this Part for the designation;
  - (2) Need not take an additional knowledge test provided the designation is within the same aircraft category.
- (k) The requirements for the designation of a pilot examiner are included in the applicable CAA STSs.

#### 2.3.10.2 EXPERIENCE REQUIREMENTS FOR PRIVATE PILOT EXAMINER

- (a) EXPERIENCE: PPE— Aeroplane Category. The examiner applicant shall have at least:
  - (1) A CPL(A), appropriate class rating(s) and IR(A);
  - (2) A valid FI license with an aeroplane category and appropriate class rating(s).
  - (3) 2,000 hours as PIC, including at least:
    - (i) 1,000 hours in aeroplanes, of which 300 hours were accrued within the past year;
    - (ii) 300 hours in the class of airplane for which designation is sought; and
    - (iii) 100 hours in aeroplanes at night.
  - (4) 500 hours as an FI in aeroplane, including at least 100 hours of flight instruction given in the class of aeroplane appropriate to the designation sought.
- (b) Experience: PPE—Helicopter Category. The examiner applicant shall have at least:
  - (1) A CPL(H) and appropriate class rating(s).
  - (2) A valid FI license with a helicopter category and appropriate class rating(s).
  - (3) 1,000 hours as PIC, including at least:
    - (i) 500 hours in helicopters, of which 100 hours were accrued within the past year; and

- (ii) 250 hours in helicopters as appropriate for the designation sought.
- (4) 200 hours as an FI in helicopters, as appropriate for the designation sought.
- (c) EXPERIENCE: PPE—Powered-Lift Category. The examiner applicant shall have at least:
  - (1) A CPL (PL) with an instrument powered-lift rating.
  - (2) A valid FI license with a powered-lift category.
  - (3) 2,000 hours as PIC, including at least:
    - (i) 1,000 hours in powered-lift, of which 300 hours were accrued within the past year; and
    - (ii) 100 hours in powered-lift at night.
  - (4) 500 hours as a FI in powered-lift.
- (d) EXPERIENCE: PPE—Airship Category. The examiner applicant shall have at least:
  - (1) A CPL(AS) and any applicable class rating(s).
  - (2) A valid FI license with an airship category and any applicable class rating(s).
  - (3) 1,000 hours as PIC, including at least:
    - (i) 500 hours in airships, of which 200 hours were accrued within the past year; and
    - (ii) 50 hours in airships at night.
  - (4) 100 hours as a FI in airships.

#### 2.3.10.3 EXPERIENCE REQUIREMENTS FOR COMMERCIAL AND INTRUMNT RATING PILOT EXAMINER

- (a) EXPERIENCE: CIRE—Aeroplane Category. The examiner applicant shall have at least:
  - (1) A CPL(A), appropriate class rating(s), and an IR(A).
  - (2) A valid FI certificate with an aeroplane category rating, the appropriate class rating(s) and an Instrument- aeroplane rating.
  - (3) 2,000 hours as PIC, including at least:
    - (i) 1,000 hours in aeroplanes, of which 300 hours were accrued within the past year;
    - (ii) 500 hours in the class of aeroplane for which designation is sought;
    - (iii) 100 hours at night in aeroplanes;
    - (iv) 100 hours of instrument flight time in actual or simulated conditions; and
    - (v) For the authority to conduct skill tests in large or turbine-powered aeroplanes:
      - (A) 300 hours in large or turbine-powered aeroplanes, of which 50 hours are in the type of aeroplane for which designation is sought, and
      - (B) 25 hours for each additional type of large aeroplane for which designation is sought;
  - (4) 500 hours as a FI in aeroplanes, including at least:
    - (i) 100 hours of flight instruction given in the class of aeroplane applicable to the designation sought; and
    - (ii) 250 hours of instrument flight instruction, of which 200 hours were given in aeroplanes.
- (b) EXPERIENCE: CIRE—Helicopter Category. The examiner applicant shall have at least:
  - (1) A CPL(H), appropriate class rating(s) and an instrument –helicopter rating.

- (2) A valid FI certificate with a helicopter category rating, the appropriate class rating(s) and an instrument-helicopter rating.
- (3) 2,000 hours as PIC, including at least:
  - (i) 500 hours in helicopters, of which 100 hours were accrued within the past year.
  - (ii) 100 hours of instrument flight time in actual or simulated conditions.
  - (iii) For the authority to conduct skill tests in large or turbine-powered aeroplanes:
    - (A) 100 hours in large helicopters, of which 50 hours are in the type of helicopter for which designation is sought; and
    - (B) 25 hours for each additional type of large helicopter for which designation is sought.
- (4) 250 hours as a FI in helicopters, including at least:
  - (1) 100 hours of flight instruction given in the helicopters; and
  - (2) 50 hours of instrument flight instruction in helicopters.
- (c) EXPERIENCE: CIRE—Powered-Lift Category. The examiner applicant shall have at least:
  - (1) A CPL with a powered-lift category rating, any applicable class rating(s) and an instrument -powered-lift rating.
  - (2) A valid FI certificate with a powered-lift category rating, any applicable class rating(s) and an instrument-powered-lift rating.
  - (3) 2,000 hours as PIC, including at least:
    - (i) 1,000 hours in powered-lifts, of which 300 hours were accrued within the past year;
    - (ii) 100 hours at night in powered-lifts;
    - (iii) 100 hours of instrument flight time in actual or simulated conditions; and
    - (iv) For the authority to conduct skill tests in large or turbine-engine powered-lifts:
      - (A) 300 hours in large or turbine-engine powered-lifts, of which 50 hours are in the type of powered-lift for which designation is sought, and
        - (B) 25 hours for each additional type of large aeroplane for which designation is sought.
  - (4) 500 hours as a FI in powered-lifts, including at least:
    - (i) 250 hours of instrument flight instruction, of which 200 hours were given in powered-lifts.

#### 2.3.10.4 EXPERIENCE REQUIREMENTS FOR COMMERCIAL PILOT EXAMINERS

- (a) EXPERIENCE: CE—Helicopter Category. The examiner applicant shall have at least:
  - (1) A CPI(H);
  - (2) A valid FI certificate with a helicopter category rating.
  - (3) 2,000 hours as PIC, including at least:
    - (i) (500 hours in helicopters, of which 100 hours were accrued within the past year;
    - (ii) For the authority to conduct skill tests in large helicopters:
      - (A) 100 hours in large helicopters, of which 50 hours are in the type of helicopter for which designation is sought; and
      - (B) 25 hours for each additional type of large helicopter for which designation is sought.

- (4) 250 hours as a FI in helicopters, including at least:
  - (i) 50 hours of instrument flight instruction in helicopters.
- (b) EXPERIENCE: CE—Airship Category. The examiner applicant shall have at least:
  - (1) A CPL(AS) and any applicable class rating(s);
  - (2) A valid FI license with an airship category and any applicable class rating(s).
  - (3) 1,000 hours as PIC, including at least:
    - (i) 500 hours in airships, of which 200 hours were accrued within the past year; and
    - (ii) 50 hours in airships at night.
  - (4) 100 hours as a FI in airships.

#### 2.3.10.5 EXPERIENCE REQUIREMENTS FOR AIRLINE TRANSPORT PILOT EXAMINERS

- (a) Experience: ATPE—Aeroplane Category. The examiner applicant shall have at least:
  - (1) An ATPL(A), appropriate class rating(s) and an Instrument—aeroplane rating.
  - (2) A valid FI certificate with an aeroplane category rating, the appropriate class rating(s) and an Instrument-Aeroplane rating.
  - (3) 2,000 hours as PIC, including at least:
    - (i) 1,500 hours in aeroplanes, of which 300 hours were accrued within the past year.
    - (ii) 500 hours in the class of aeroplane for which designation is sought.
    - (iii) 100 hours at night in aeroplanes.
    - (iv) 200 hours in complex aeroplanes.
    - (v) 100 hours of instrument flight time in actual or simulated conditions.
    - (vi) For the authority to conduct skill tests in large or turbine-powered aeroplanes:
      - (A) 300 hours in large or turbine-powered aeroplanes, of which 50 hours are in the type of aeroplane for which designation is sought; and
      - (B) 25 hours for each additional type of large aeroplane for which designation is sought.
  - (4) 500 hours as a FI in aeroplanes, including at least:
    - (i) 100 hours of flight instruction given in the class of aeroplane applicable to the designation sought;
    - (ii) 250 hours of instrument flight instruction, of which 200 hours were given in aeroplanes; and
    - (iii) 150 hours flight instruction given for a CPL(A) or an ATPL(A) or an IR(A).
- (b) EXPERIENCE: ATPE—Helicopter Category. The examiner applicant shall have at least:
  - (1) An ATPL(H), appropriate class rating(s) and an instrument –helicopter rating.
  - (2) A valid FI certificate with a helicopter category rating, the appropriate class rating(s) and an Instrument-Helicopter rating.
  - (3) 2,000 hours as PIC, including at least:
    - (i) 1,200 hours in helicopters, of which 100 hours were accrued within the past year;
    - (ii) 100 hours of instrument flight time in actual or simulated conditions; and
    - (iii) For the authority to conduct skill tests in large helicopters:

- (A) 100 hours in large helicopters, of which 50 hours are in the type of helicopter for which designation is sought, and
- (B) 25 hours for each additional type of large helicopter for which designation is sought.
- (4) 250 hours as a FI in helicopters, including at least:
  - (i) 100 hours of flight instruction given in helicopters; and
  - (ii) 50 hours of instrument flight instruction in helicopters.
- (c) EXPERIENCE: ATPE—Powered-Lift Category. The examiner applicant shall have at least:
  - (1) An ATPL(PI), any applicable class rating(s) and an instrument –powered-lift rating.
  - (2) A valid FI certificate with a powered-lift category rating, any applicable class rating(s) and an instrument-powered-lift rating.
  - (3) 2,000 hours as PIC, including at least:
    - (i) 1,500 hours in powered-lifts, of which 300 hours were accrued within the past year;
    - (ii) 100 hours at night in powered-lifts;
    - (iii) 100 hours of instrument flight time in actual or simulated conditions; and
    - (iv) For the authority to conduct skill tests in large or turbine-engine powered-lifts:
      - (A) 300 hours in large or turbine-engine powered-lifts, of which 50 hours are in the type of powered-lift for which designation is sought; and
      - (B) 25 hours for each additional type of large aeroplane for which designation is sought.
  - (4) 500 hours as a FI in powered-lifts, including at least:
    - (i) 250 hours of instrument flight instruction, of which 200 hours were given in powered-lifts; and
    - (ii) 150 hours of flight instruction given for a CPL(PL), an ATPL(PL) or and IR(PL).

## 2.3.11 EXPERIENCE REQUIREMENTS FOR FLIGHT INSTRUCTOR EXAMINER

- (a) The examiner applicant shall have at least:
  - (1) The requirements for a CE or a CIRE designation, as appropriate for the category and class of aircraft pertinent to the FIE designation sought; and.
  - (2) Held a CE or CIRE designation for at least a year prior to designation as a FIE.

## 2.3.12 REMOTE PILOT LICENSERESERVED

- 2.4 RESERVED
- 2.5 RESERVED

## 2.6 AVIATION MAINTENANCE LICENSING, INSTRUCTORS AND DESIGNATED EXAMINERS

- (a) For the purpose of this Part, the Authority shall be:
  - (1) the entity to whom a person first applies for the issuance of an aircraft maintenance license;
- (b) The Authority shall be responsible for defining:

- (1) the list of aircraft types; and
- (2) what airframe/engine combinations are included in each particular aircraft type rating.

## 2.6.1 SECTION A – TECHNICAL REQUIREMENTS

## SUBPART A - AIRCRAFT MAINTENANCE LICENSE

#### 2.6.1.1 SCOPE

(a) This section defines the aircraft maintenance license and establishes the requirements for application, issue and continuation of its validity.

#### 2.6.1.2 LICENSE CATEGORIES

- (a) Aircraft maintenance licenses include the following categories:
  - Category A
  - Category B1
  - Category B2
  - Category B3
    - Category C
- (b) Categories A and B1 are subdivided into subcategories relative to combinations of aeroplanes, helicopters, turbine and piston engines. These subcategories are:
  - A1 and B1.1 Aeroplanes Turbine
  - A2 and B1.2 Aeroplanes Piston
  - A3 and B1.3 Helicopters Turbine
  - A4 and B1.4 Helicopters Piston
- (c) Category B2 The B2 license is applicable to all aircraft.
- (d) Category B3 is applicable to piston-engine non-pressurized aeroplanes of 2 000 kg MTOM and below.
- (e) Category C is applicable to Large Aircraft Certificated maximum takeoff weight (MTOW) of more than 12,500 lb (5,700 kg)
- (f)

## 2.6.1.3 AIRCRAFT GROUPS

- (a) For the purpose of ratings on aircraft maintenance licenses, aircraft shall be classified in the following groups:
  - (1) Group1: complex motor-powered aircraft as well as multiple engine helicopters, aeroplanes with maximum certified operating altitude exceeding FL290, aircraft equipped with fly-by-wire systems and other aircraft requiring an aircraft type rating when defined so by the Authority.
  - (2) Group 2: aircraft other than those in Group 1 belonging to the following subgroups:
    - sub-group 2a: single turbo-propeller engine aeroplanes;
    - sub-group 2b: single turbine engine helicopters;
    - sub-group 2c: single piston engine helicopters.
  - (3) Group 3: piston engine aeroplanes other than those in Group 1.

## 2.6.1.4 APPLICATION

(a) An application for an aircraft maintenance license or change to such license shall be made on a SMCAA Form in a manner established by the Authority and submitted thereto.

- (b) An application for the change to an aircraft maintenance license shall be made to the Authority.
- (c) An addition to the documents required in points 2.6.1.4(a), 2.6.1.4(b) and 2.6.2.7, as appropriate, the applicant for additional basic categories or subcategories to an aircraft maintenance license shall submit his/her current original aircraft maintenance license to the Authority together with the SMCAA Form 19.
- (d) Where the applicant for change of the basic categories qualifies for such change via the procedure referred to in point 2.6.2.6, the application shall be sent to the Authority referred to in point 2.6.1.
- (e) Where the applicant for change of the basic categories qualifies for such change via the procedure referred to in point 2.6.2.7, the maintenance organization approved in accordance with Part 6 shall send the aircraft maintenance license together with the SMCAA Form 19 to the Authority referred to in point 2.6.1 for stamp and signature of the change or reissue of the license, as appropriate.
- (f) Each application shall be supported by documentation to demonstrate compliance with the applicable theoretical knowledge, skill test, skill test and experience requirements at the time of application.
- (g) Each application shall comply with the applicable fees as per "Landsverordening Luchtvaarttarieven".

#### 2.6.1.5 ELIGIBILITY

(a) An applicant for an aircraft maintenance license shall be at least 18 years of age.

#### 2.6.1.6 PRIVILEGES

- (a) The following privileges shall apply:
  - (1) A category A aircraft maintenance license permits the holder to issue certificates of release to service following minor scheduled line maintenance and simple defect rectification within the limits of tasks specifically endorsed on the certification authorization referred to in Part 6. The certification privileges shall be restricted to work that the license holder has personally performed in the maintenance organization that issued the certification authorization.
  - (2) A category B1 aircraft maintenance license shall permit the holder to issue certificates of release to service and to act as B1 support staff following:
    - (i) maintenance performed on aircraft structure, powerplant and mechanical and electrical systems,
    - (ii) work on avionic systems requiring only simple tests to prove their serviceability and not requiring troubleshooting.

Category B1 includes the corresponding A subcategory.

- (3) A category B2 aircraft maintenance license shall permit the holder:
  - to issue certificates of release to service and to act as B2 support staff for following:
    - (A) maintenance performed on avionic and electrical systems, and
    - (B) electrical and avionics tasks within powerplant and mechanical systems, requiring only simple tests to prove their serviceability; and
  - (ii) to issue certificates of release to service following minor scheduled line maintenance and simple defect rectification within the limits of tasks specifically endorsed on the certification authorization referred to in Part 6. This certification privilege shall be restricted to work that the license holder has personally performed in the maintenance organization which issued the certification authorization and limited to the ratings already endorsed in the B2 license.

The category B2 license does not include any A subcategory.

- (4) A category B3 aircraft maintenance license shall permit the holder to issue certificates of release to service and to act as B3 support staff for:
  - (i) maintenance performed on aeroplane structure, powerplant and mechanical and electrical systems,

- (ii) work on avionic systems requiring only simple tests to prove their serviceability and not requiring troubleshooting.
- (5) A category C aircraft maintenance license shall permit the holder to issue certificates of release to service following base maintenance on aircraft. The privileges apply to the aircraft in its entirety.
- (b) The holder of an aircraft maintenance license may not exercise its privileges unless:
  - (1) in compliance with the applicable requirements of Part 5 and Part 6; and
  - (2) in the preceding 2-year period he/she has, either had 6 months of maintenance experience in accordance with the privileges granted by the aircraft maintenance license or, met the provision for the issue of the appropriate privileges; and
  - (3) he/she has the adequate competence to certify maintenance on the corresponding aircraft; and
  - (4) he/she is able to read, write and communicate to an understandable level in the language(s) in which the technical documentation and procedures necessary to support the issue of the certificate of release to service are written.

#### 2.6.1.7 BASIC KNOWLEDGE REQUIREMENTS

- (a) An applicant for an aircraft maintenance license, or the addition of a category or subcategory to such a license, shall demonstrate by examination a level of knowledge in the appropriate subject modules in accordance with the IS 2.6.1.7 to Part 2. The examination shall be conducted either by a training organization appropriately approved in accordance with Part 3 or by the Authority.
- (b) The training courses and examinations shall be passed within 10 years prior to the application for an aircraft maintenance license or the addition of a category or subcategory to such aircraft maintenance license. Should this not be the case, examination credits may however be obtained in accordance with point (c).
- (c) The applicant may apply to the Authority for full or partial examination credit to the basic knowledge requirements for:
  - (1) basic knowledge examinations that do not meet the requirement described in point (b) above; and
  - (2) any other technical qualification considered by the Authority to be equivalent to the knowledge standard of Part 2.

Credits shall be granted in accordance with Subpart E of Section B of this Part.

(d) Credits expire 10 years after they were granted to the applicant by the Authority. The applicant may apply for new credits after expiration.

#### 2.6.1.8 BASIC EXPERIENCE REQUIREMENTS

- (a) An applicant for an aircraft maintenance license shall have acquired:
  - (1) for category A, subcategories B1.2 and B1.4 and category B3:
    - (i) 1 year of practical maintenance experience on operating aircraft, if the applicant has no previous relevant technical training; or
    - (ii) 2 years of practical maintenance experience on operating aircraft and completion of training considered relevant by the Authority as a skilled worker, in a technical trade; or
    - (iii) 1 year of practical maintenance experience on operating aircraft and completion of a basic training course approved in accordance with Part 3;
  - (2) for category B2 and subcategories B1.1 and B1.3:
    - (i) 5 years of practical maintenance experience on operating aircraft if the applicant has no previous relevant technical training; or

- (ii) 3 years of practical maintenance experience on operating aircraft and completion of training considered relevant by the competent authority as a skilled worker, in a technical trade; or
- (iii) 2 years of practical maintenance experience on operating aircraft and completion of a basic training course approved in accordance with Part 3;
- (3) for category C with respect to large aircraft:
  - (i) 3 years of experience exercising category B1.1, B1.3 or B2 privileges on large aircraft or as support staff or, a combination of both; or
  - 5 years of experience exercising category B1.2 or B1.4 privileges on large aircraft or as support staff or a combination of both;
    - 1. for category C with respect to other than large aircraft: 3 years of experience exercising category B1 or B2 privileges on other than large aircraft or as support staff or a combination of both;
    - 2. for category C obtained through the academic route: an applicant holding an academic degree in a technical discipline, from a university or other higher educational institution Recognized by the Authority, 3 years of experience working in a civil aircraft maintenance environment on a representative selection of tasks directly associated with aircraft maintenance including 6 months of observation of base maintenance tasks.
- (b) An applicant for an extension to an aircraft maintenance license shall have a minimum civil aircraft maintenance experience requirement appropriate to the additional category or subcategory of license applied for as defined in IS 2.6.1.8 to this Part.
- (c) The experience shall be practical and involve a representative cross section of maintenance tasks on aircraft.
- (d) At least 1 year of the required experience shall be recent maintenance experience on aircraft of the category/subcategory for which the initial aircraft maintenance license is sought. For subsequent category/subcategory additions to an existing aircraft maintenance license, the additional recent maintenance experience required may be less than 1 year but shall be at least 3 months. The required experience shall be dependent upon the difference between the license category/subcategory held and applied for. Such additional experience shall be typical of the new license category/ subcategory sought.
- (e) Notwithstanding paragraph (a), aircraft maintenance experience gained outside a civil aircraft maintenance environment shall be accepted when such maintenance is equivalent to that required by this Part as established by the Authority. Additional experience of civil aircraft maintenance shall, however, be required to ensure adequate understanding of the civil aircraft maintenance environment.
- (f) Experience shall have been acquired within the 10 years preceding the application for an aircraft maintenance license or the addition of a category or subcategory to such a license.

#### 2.6.1.9 RESERVED

#### 2.6.1.10 CONTINUED VALIDITY OF THE AIRCRAFT MAINTENANCE LICENSE

- (a) The aircraft maintenance license becomes invalid 5 years after its last issue or change, unless the holder submits his/her aircraft maintenance license to the Authority that issued it, in order to verify that the information contained in the license is the same as that contained in the Authority records, pursuant to point 2.6.2.10.
- (b) The holder of an aircraft maintenance license shall complete the relevant parts of SMCAA Form 19 (see IS 2.6.1.4) and submit it with the holder's copy of the license to the Authority that issued the original aircraft maintenance license, unless the holder works in a maintenance organization approved in accordance with Part 6 that has a procedure in its exposition whereby such organization may submit the necessary documentation on behalf of the aircraft maintenance license holder.

- (c) Any certification privilege based upon an aircraft maintenance license becomes invalid as soon as the aircraft maintenance license is invalid.
- (d) The aircraft maintenance license is only valid (i) when issued and/or changed by the Authority and (ii) when the holder has signed the document.

#### 2.6.1.11 ENDORSEMENT WITH AIRCRAFT RATINGS

- (a) In order to be entitled to exercise certification privileges on a specific aircraft type, the holder of an aircraft maintenance license need to have his/her license endorsed with the relevant aircraft ratings.
- (b) For category B1, B2 or C the relevant aircraft ratings are the following:
  - 1. For group 1 aircraft, the appropriate aircraft type rating.
  - 2. For group 2 aircraft, the appropriate aircraft type rating, manufacturer sub-group rating or full sub-group rating.
  - 3. For group 3 aircraft, the appropriate aircraft type rating or full group rating.
  - 4. For category B3, the relevant rating is 'piston-engine non-pressurized aeroplanes of 2 000 kg MTOM and below'.
  - 5. For category A, no rating is required, subject to compliance with the requirements of Part 6.
- (c) The endorsement of aircraft type ratings requires the satisfactory completion of the relevant category B1, B2 or C aircraft type training.
- (d) Addition to the requirement of point (b), the endorsement of the first aircraft type rating within a given category/sub-category requires satisfactory completion of the corresponding On the Job Training, as described in IS 2.6.1.11 to Part 2.
- (e) By derogation from points (b) and (c), for group 2 and 3 aircraft, aircraft type ratings may also be granted after:
  - (i) satisfactory completion of the relevant category B1, B2 or C aircraft type examination described in IS 2.6.1.11 to this Part 2, and
  - (ii) in the case of B1 and B2 category, demonstration of practical experience on the aircraft type. In that case, the practical experience shall include a representative cross section of maintenance activities relevant to the license category.
    - 1. In the case of a category C rating for a person qualified by holding an academic degree as specified in point 2.6.1.8 (a)(5), the first relevant aircraft type examination shall be at the category B1 or B2 level.
  - (1) For group 2 aircraft:
    - the endorsement of manufacturer sub-group ratings for category B1 and C license holders requires complying with the aircraft type rating requirements of at least two aircraft types from the same manufacturer which combined are representative of the applicable manufacturer subgroup;
    - the endorsement of full sub-group ratings for category B1 and C license holders requires complying with the aircraft type rating requirements of at least three aircraft types from different manufacturers which combined are representative of the applicable sub-group;
    - 4. the endorsement of manufacturer sub-groups and full sub-group ratings for category B2 license holders requires demonstration of practical experience which shall include a representative cross section of maintenance activities relevant to the license category and to the applicable aircraft sub-group.
  - (2) For group 3 aircraft:
    - the endorsement of the full group 3 rating for category B1, B2 and C license holders requires demonstration of practical experience, which shall include a representative cross section of maintenance activities relevant to the license category and to the group 3.

- for category B1, unless the applicant provides evidence of appropriate experience, the group 3 rating shall be subject to the following limitations, which shall be endorsed on the license:
  - (i) pressurized aeroplanes
  - (ii) metal structure aeroplanes
  - (iii) composite structure aeroplanes
  - (iv) wooden structure aeroplanes
  - (v) aeroplanes with metal tubing structure covered with fabric.
- (3) For the B3 license:
  - 1. the endorsement of the rating 'piston-engine non-pressurized aeroplanes of 2 000 kg MTOM and below' requires demonstration of practical experience which shall include a representative cross-section of maintenance activities relevant to the license category.
  - 2. unless the applicant provides evidence of appropriate experience, the rating referred to in point 1 shall be subject to the following limitations, which shall be endorsed on the license:
    - (i) wooden structure aeroplanes
    - (ii) aeroplanes with metal tubing structure covered with fabric
    - (iii) metal structure aeroplanes
    - (iv) composite structure aeroplanes.

#### 2.6.1.12 LIMITATIONS

- (a) Limitations introduced on an aircraft maintenance license are exclusions from the certification privileges and affect the aircraft in its entirety.
- (b) For limitations referred to in point 2.6.1.11, limitations shall be removed upon:
- (c) 1.demonstration of appropriate experience; or
- (d) 2. after a satisfactory skill test performed by the Authority.
- (e) For limitations referred to in point 2.6.1.14, limitations shall be removed upon satisfactory completion of examination on those modules/subjects defined in the applicable conversion report referred to in point 2.6.2.14.

#### 2.6.1.13 EVIDENCE OF QUALIFICATION

(a) Personnel exercising certification privileges as well as support staff shall produce their license, as evidence of qualification, within 24 hours upon request by an authorized person.

#### 2.6.1.14 CONVERSION PROVISIONS

- (a) The holder of a certifying staff qualification valid in Sint Maarten, prior to the date of entry into force of Part 2 shall be issued an aircraft maintenance license by the Authority without further examination subject to the conditions specified in Section B Subpart D.
- (b) A person undergoing a certifying staff qualification process valid in Sint Maarten, prior to the date of entry into force of Part 2 may continue to be qualified. The holder of a certifying staff qualification gained following such process shall be issued an aircraft maintenance license by the Authority without further examination subject to the conditions specified in Section B Subpart D.
- (c) Where necessary, the aircraft maintenance license shall contain limitations in accordance with point 2.6.1.12 to reflect the differences between (i) the scope of the certifying staff qualification valid in Sint Maarten before the entry into force of this Regulation and (ii) the basic knowledge requirements and the basic examination standards laid down in IS 2.6.1.7 and 2.6.2.13 to this Part.

(d) By derogation to paragraph (c) for aircraft not involved in commercial air transport other than large aircraft, the aircraft maintenance license shall contain limitations in accordance with point 2.6.1.12 to ensure that the certifying staff privileges valid in Sint Maarten before the entry into force of this Regulation and the privileges of the converted Part 2 aircraft maintenance license remain the same.

#### 2.6.2 SECTION B – PROCEDURES FOR AUTHORITY

#### SUBPART A – GENERAL

#### 2.6.2.1 SCOPE

(a) This section establishes the procedures including the administrative requirements to be followed by the Authorities in charge of the implementation and the enforcement of Section A of this Part.

#### 2.6.2.2 AUTHORITY

(a) General

The Authority is responsible for the issuance, continuation, change, suspension or revocation of aircraft maintenance licenses.

This Authority shall establish an adequate organizational structure to ensure compliance with this Part.

(b) Resources

The Authority shall be appropriately staffed to ensure the implementation of the requirements of this Part.

(c) Procedures

The Authority shall establish documented procedures detailing how compliance with this Part is accomplished. These procedures shall be reviewed and amended to ensure continued compliance.

#### 2.6.2.3 RECORD-KEEPING

- (a) The Authority shall establish a system of record-keeping that allows adequate traceability of the process to issue, revalidate, change, suspend or revoke each aircraft maintenance license.
- (b) These records shall include for each license:
  - 1. the application for an aircraft maintenance license or change to that license, including all supporting documentation;
  - 2. a copy of the aircraft maintenance license including any changes;
  - 3. copies of all relevant correspondence;
  - 4. details of any exemption and enforcement actions;
  - 5. any report from other competent authorities relating to the aircraft maintenance license holder;
  - 6. the records of examinations conducted by the Authority;
  - 7. the applicable conversion report used for conversion;
  - 8. the applicable credit report used for crediting.
- (c) Records referred to in points 1 to 5 of point (b) shall be kept at least 7 years after the end of the license validity.
- (d) Records referred to in points 6, 7 and 8 of point (b) shall be kept for an unlimited period.

#### 2.6.2.4 MUTUAL EXCHANGE OF INFORMATION

(a) In order to implement the requirement of this Regulation, the authority shall participate in a mutual exchange of information with other ICAO Member States.

(b) Without prejudice to the competencies of the ICAO Member States, in the case of a potential safety threat involving several ICAO Member States, the authority shall assist in carrying out the necessary oversight action.

## 2.6.2.5 EXEMPTIONS

(a) All exemptions granted in accordance with this Part shall be approved by the Director General, recorded and retained by the Authority.

#### SUBPART B - ISSUE OF AN AIRCRAFT MAINTENANCE LICENSE

(a) This Subpart provides the procedures to be followed by the Authority to issue, change or continue an aircraft maintenance license.

## 2.6.2.6 PROCEDURE FOR THE ISSUE OF AN AIRCRAFT MAINTENANCE LICENSE BY THE AUTHORITY

- (a) On receipt of SMCAA Form 19 and any supporting documentation, the Authority shall verify the SMCAA Form 19 for completeness and ensure that the experience claimed meets the requirement of this Part.
- (b) The authority shall verify an applicant's examination status and/or confirm the validity of any credits to ensure that all required modules of IS 2.6.1.7 have been met as required by this Part.
- (c) When having verified the identity and date of birth of the applicant and being satisfied that the applicant meets the standards of knowledge, skill and experience required by this Part, the authority shall issue the relevant aircraft maintenance license to the applicant. The same information shall be kept on Authority records.
- (d) In the case where aircraft types or groups are endorsed at the time of the issuance of the first aircraft maintenance license, the Authority shall verify compliance with point 2.6.2.9.

#### 2.6.2.7 PROCEDURE FOR THE ISSUE OF AN AIRCRAFT MAINTENANCE LICENSE VIA A MAINTENANCE ORGANIZATION APPROVED IN ACCORDANCE WITH PART 6

- (a) A maintenance organization approved in accordance with Part 6, when authorized to carry out this activity by the Authority, may (i) prepare the aircraft maintenance license on behalf of the Authority or (ii) make recommendations to the Authority regarding the application from an individual for a aircraft maintenance license so that the Authority may prepare and issue such license.
- (b) Maintenance organizations referred to in point (a) shall ensure compliance with points 2.6.2.6 (a) and (b).
- (c) In all cases, the aircraft maintenance license can only be issued to the applicant by the Authority.

#### 2.6.2.8 PROCEDURE FOR THE CHANGE OF AN AIRCRAFT MAINTENANCE LICENSE TO INCLUDE AN ADDITIONAL BASIC CATEGORY OR SUBCATEGORY

- (a) At the completion of the procedures specified in points 2.6.2.6 or 2.6.2.7, the Authority shall endorse the additional basic category or subcategory on the aircraft maintenance license by stamp and signature or reissue the license.
- (b) The Authority record system shall be changed accordingly.

#### 2.6.2.9 PROCEDURE FOR THE CHANGE OF AN AIRCRAFT MAINTENANCE LICENSE TO INCLUDE AN AIRCRAFT RATING OR TO REMOVE LIMITATIONS

- (a) On receipt of an approved CAA form and any supporting documentation demonstrating compliance with the requirements of the applicable rating together with the accompanying aircraft maintenance license, the Authority shall either:
  - 1. endorse the applicant's aircraft maintenance license with the applicable aircraft rating; or
  - 2. reissue the said license to include the applicable aircraft rating; or
  - 3. remove the applicable limitations in accordance with point 2.6.1.12;

The Authority record system shall be changed accordingly.

- (b) In the case where the complete type training is not conducted by maintenance training organization appropriately approved in accordance with Part 3, the Authority shall be satisfied that all type training requirements are complied with before the type rating is issued.
- (c) In the case where the On the Job Training is not required, the aircraft type rating shall be endorsed based on a Certificate of Recognition issued by a maintenance training organization approved in accordance with Part 3.
- (d) In the case where the aircraft type training is not covered by a single course, the authority shall be satisfied prior to the type rating endorsement that the content and length of the courses fully satisfy the scope of the license category and that the interface areas have been appropriately addressed.
- (e) In the case of differences training, the Authority shall be satisfied that (i) the applicant's previous qualification, supplemented by (ii) either a course approved in accordance with Part 3 or a course directly approved by the Authority, are acceptable for type rating endorsement.
- (f) Compliance with the practical elements shall be demonstrated (i) by the provision of detailed skill test records or a logbook provided by a maintenance organization appropriately approved in accordance with Part 6 or, where available, (ii) by a training certificate covering the skill test element issued by a maintenance training organization appropriately approved in accordance with Part 3.
- (g) Aircraft type endorsement shall use the aircraft type ratings specified by the Authority.

#### 2.6.2.10 PROCEDURE FOR THE RENEWAL OF AN AIRCRAFT MAINTENANCE LICENSE VALIDITY

- (a) The Authority shall compare the holder's aircraft maintenance license with the Authority records and verify any pending revocation, suspension or change action pursuant to point 2.6.2.20. If the documents are identical and no action is pending pursuant to point 2.6.2.20, the holder's copy shall be renewed for 5 years and the file endorsed accordingly.
- (b) If the Authority records are different from the aircraft maintenance license held by the license holder:
  - 1. the Authority shall investigate the reasons for such differences and may choose not to renew the aircraft maintenance license.
  - 2. he Authority shall inform the license holder and any known maintenance organization approved in accordance with Part 5 or Part 6 that may be directly affected of such fact.
  - 3. the Authority shall, if necessary, take action in accordance with point 2.6.2.20 to revoke, suspend or change the license in question.

#### 2.6.2.11 PROCEDURE FOR THE CONVERSION OF LICENSES INCLUDING GROUP RATINGS

- (a) Individual aircraft type ratings already endorsed on the aircraft maintenance license referred to in Beschikking Luchtvaartbrevetering (P.B. 1995 no. 108, as amended) shall remain on the license and shall not be converted to new ratings unless the license holder fully meets the requirements for endorsement defined in point 2.6.1.11 of this Part for the corresponding group/sub-group ratings.
- (b) The conversion shall be performed in accordance with the following conversion table:
  - 1. for category B1 or C:
    - helicopter piston engine, full group: converted to 'full sub-group 2c' plus the aircraft type ratings for those single piston engine helicopters which are in group 1,
    - helicopter piston engine, manufacturer group: converted to the corresponding 'manufacturer sub-group 2c' plus the aircraft type ratings for those single piston engine helicopters of that manufacturer which are in group 1,
    - helicopter turbine engine, full group: converted to 'full sub-group 2b' plus the aircraft type ratings for those single turbine engine helicopters which are in group 1,

- helicopter turbine engine, manufacturer group: converted to the corresponding 'manufacturer sub-group 2b' plus the aircraft type ratings for those single turbine engine helicopters of that manufacturer which are in group 1,
- aeroplane single piston engine metal structure, either full group or manufacturer group: converted to 'full group 3'. For the B1 license the following limitations shall be included: composite structure aeroplanes, wooden structure aeroplanes and metal tubing and fabric aeroplanes,
- aeroplane multiple piston engines metal structure, either full group or manufacturer group: converted to 'full group 3'. For the B1 license the following limitations shall be included: composite structure aero- planes, wooden structure aeroplanes and metal tubing and fabric aeroplanes,
- aeroplane single piston engine wooden structure, either full group or manufacturer group: converted to 'full group 3'. For the B1 license the following limitations shall be included: metal structure aeroplanes, composite structure aeroplanes and metal tubing and fabric aeroplanes,
- aeroplane multiple piston engine wooden structure, either full group or manufacturer group: converted to 'full group 3'. For the B1 license the following limitations shall be included: metal structure aeroplanes, composite structure aeroplanes and metal tubing and fabric aeroplanes,
- aeroplane single piston engine composite structure, either full group or manufacturer group: converted to 'full group 3'. For the B1 license the following limitations shall be included: metal structure aeroplanes, wooden structure aeroplanes and metal tubing and fabric aeroplanes,
- aeroplane multiple piston engine composite structure, either full group or manufacturer group: converted to 'full group 3'. For the B1 license the following limitations shall be included: metal structure aeroplanes, wooden structure aeroplanes and metal tubing and fabric aeroplanes,
- aeroplane turbine single engine, full group: converted to 'full sub-group 2a' plus the aircraft type ratings for those single turboprop aeroplanes which did not require an aircraft type rating in the previous system and are in group 1,
- aeroplane turbine single engine, manufacturer group: converted to the corresponding 'manufacturer sub-group 2a' plus the aircraft type ratings for those single turboprop aeroplanes of that manufacturer which did not require an aircraft type rating in the previous system and are in group 1,
- aeroplane turbine multiple engine, full group: converted to the aircraft type ratings for those multiple turboprop aeroplanes which did not require an aircraft type rating in the previous system;
- 2. for category B2:
  - aeroplane: converted to 'full sub-group 2a' and 'full group 3', plus the aircraft type ratings for those aeroplanes which did not require an aircraft type rating in the previous system and are in group 1,
  - helicopter: converted to 'full sub-groups 2b and 2c', plus the aircraft type ratings for those helicopters which did not require an aircraft type rating in the previous system and are in group 1;

- 3. for category C:
  - aeroplane: converted to 'full sub-group 2a' and 'full group 3', plus the aircraft type ratings for those aeroplanes which did not require an aircraft type rating in the previous system and are in group 1,
  - helicopter: converted to 'full sub-groups 2b and 2c', plus the aircraft type ratings for those helicopters which did not require an aircraft type rating in the previous system and are in group 1.
- (c) If the license was subject to limitations following the conversion process referred to in point 2.6.1.14, these limitations shall remain on the license, unless they are removed under the conditions defined in the relevant conversion report referred to in point 2.6.2.14.

#### 2.6.2.12 PROCEDURE FOR THE DIRECT APPROVAL OF AIRCRAFT TYPE TRAINING

(a) The Authority may approve aircraft type training not conducted by a maintenance training organization approved in accordance with Part 3, pursuant to point 1 of IS 2.6.1.11 to this Part. In such case the Authority shall have a procedure to ensure the aircraft type training complies with IS 2.6.1.11 of this Part.

#### SUBPART C - EXAMINATIONS

(a) This Subpart provides the procedures to be followed for the examinations conducted by the Authority.

#### 2.6.2.13 EXAMINATION BY THE AUTHORITY

- 1. All examination questions shall be kept in a secure manner prior to an examination, to ensure that candidates will not know which particular questions will form the basis of the examination.
- 2. The Authority shall nominate:
  - (i) persons who control the questions to be used for each examination;
  - (ii) examiners who shall be present during all examinations to ensure the integrity of the examination.
- 3. Basic examinations shall follow the standard specified in IS 2.6.1.7 and 2.6.2.13 to this Part.
- 4. Type training examinations and type examinations shall follow the standard specified in IS 2.6.1.11 to Part.
- 5. New essay questions shall be raised at least every 6 months and questions already used withdrawn or rested from use. A record of the questions used shall be retained in the records for reference.
- All examination papers shall be handed out at the start of the examination to the candidate and handed back to the examiner at the end of the allotted examination time period. No examination paper may be removed from the examination room during the allotted examination time period.
- 7. Apart from specific documentation needed for type examinations, only the examination paper may be available to the candidate during the examination.
- 8. Examination candidates shall be separated from each other so that they cannot read each other's examination papers. They may not speak to any person other than the examiner.
- 9. Candidates who are proven to be cheating shall be banned from taking any further examination within 12 months of the date of the examination in which they were found cheating.

#### SUBPART D - CONVERSION OF CERTIFYING STAFF QUALIFICATIONS

(a) This Subpart provides the procedures for the conversion of certifying staff qualifications referred to in point 2.6.1.14 to aircraft maintenance licenses.

#### 2.6.2.14 GENERAL

- (a) The Authority may only convert qualifications (i) obtained in Sint Maarten for which it is competent and (ii) valid prior to the entry into force of the applicable requirements of this Part.
- (b) The Authority may only perform the conversion in accordance with a conversion report established pursuant to points 2.6.2.15 or 2.6.2.16, as applicable.
- (c) Conversion reports shall be either (i) developed by the Authority or (ii) approved by the Authority to ensure compliance with this Part.
- (d) Conversion reports together with any change of these shall be kept on record by the Authority in accordance with point 2.6.2.3.
- (e) General requirements for conversion. A person who holds a current and valid AMT license issued\ by another Contracting State, in accordance with ICAO Annex 1, may apply for conversion of such license for use on aircraft registered in Sint Maarten provided the following requirements are met:
  - (1) The applicant for the conversion shall present to the Authority the foreign license and evidence of the experience required by presenting the personal record.
  - (2) The applicant for the conversion shall demonstrate to the Authority evidence of language proficiency in the English language.
  - (3) Demonstrate, to the satisfaction of the Authority and relevant to the license to be converted, knowledge of Sint Maarten's:
    - a) Air Law;
    - b) Applicable Airworthiness requirements governing certification and continuing airworthiness;
    - c) Approved maintenance organizations and procedures.
- (f) The applicant for the validation certificate shall complete a skill test for the relevant license and ratings that he or she wants to be converted relevant to the privileges of the license held; and
  - (1) Have a minimum of four years AMT experience.
    - a) The Authority will verify the authenticity of the license, ratings and authorizations with the state of license issue prior to issuing the converted license.
    - b) The Authority will only convert ratings or authorizations on the foreign license together with the conversion of a license.
- (g) Conversion of AMT licenses that have been validated in accordance with 2.2.4.7. The holder of a current and valid AMT license issued by another Contracting State in accordance with ICAO Annex 1 who has a validation in accordance with 2.2.4.7 and can show evidence of 12 months performing maintenance on aircraft registered in Sint Maarten may convert his/her AMT license with no further formality.

#### 2.6.2.15 CONVERSION OF AMT LICENSES BY RELIANCE UPON THE LICENSING SYSTEM OF ANOTHER CONTRACTING STATE

- (a) Notwithstanding paragraphs 2.2.4.7, the Authority may issue a license with the applicable ratings to the holder of a current and valid foreign license, provided:
  - (1) the license is issued by another ICAO Contracting State;
  - (2) the Authority is convinced that the license has been issued on the basis of at least Part 2; and
  - (3) there is an agreement between the Authority and the other Contracting State about recognition of licenses.
- (b) The applicant for the conversion shall present to the Authority the:
  - (1) Foreign license; and
  - (2) Evidence of the currency of the license by presenting the personnel record (e.g. logbook).

- (c) The applicant for the conversion shall demonstrate to the Authority evidence of language proficiency in English.
- (d) The applicant shall demonstrate, to the satisfaction of the Authority and relevant to the license to be converted knowledge of Sint Maarten's:
  - (1) Air law;
  - (2) Applicable airworthiness requirements governing certification and continuing airworthiness; and;
  - (3) Approved maintenance organizations and procedures.
- (e) The Authority will verify the authenticity of the license, ratings and authorizations with the State of License issue prior to issuing the license.
- (f) The IS 2.2.4.10 contains procedures conversion of AMT licenses by reliance upon the licensing system of another ICAO Contracting State.

#### 2.6.2.16 CONVERSION REPORT FOR NATIONAL QUALIFICATIONS

- (a) The conversion report for national certifying staff qualifications shall describe the scope of each type of qualification, including the associated national license, if any, the associated privileges and include a copy of the relevant national regulations defining these.
- (b) The conversion report shall show for each type of qualification referred to in point (a):
  - 1. to which aircraft maintenance license it will be converted; and
  - 2. which limitations shall be added in accordance with points 2.6.1.14(c) or (d), as applicable; and
  - 3. the conditions to remove the limitations, specifying the module/subjects on which examination is needed to remove the limitations and obtain a full aircraft maintenance license, or to include an additional (sub-) category. This shall include the modules defined in IS 2.6.1.11 to this Part not covered by the national qualification.

# 2.6.2.17 CONVERSION REPORT FOR APPROVED MAINTENANCE ORGANIZATIONS AUTHORIZATIONS

- (a) For each approved maintenance organization concerned, the conversion report shall describe the scope of each type of authorization issued by the maintenance organization and include a copy of the relevant approved maintenance organization's procedures for the qualification and the authorization of certifying staff on which the conversion process is based.
- (b) The conversion report shall show for each type of authorization referred to in point (a):
  - 1. to which aircraft maintenance license it will be converted, and
  - 2. which limitations shall be added in accordance with points 2.6.1.14(c) or (d), as applicable, and
  - 3. the conditions to remove the limitations, specifying the module/subjects on which examination is needed to remove the limitations and obtain a full aircraft maintenance license, or to include an additional (sub-) category. This shall include the modules defined in IS 2.6.1.11 to this Part not covered by the national qualification.

#### SUBPART E - EXAMINATION CREDITS

(a) This Subpart provides the procedures for granting examination credits referred to in point 2.6.1.7(c).

#### 2.6.2.18 GENERAL

- (a) The Authority may only grant credit on the basis of a credit report prepared in accordance with point 2.6.2.18.
- (b) The credit report shall be either (i) developed by the competent authority or (ii) approved by the Authority to ensure compliance with this Part.

(c) Credit reports together with any change of these shall be dated and kept on record by the Authority in accordance with point 2.6.2.3.

#### 2.6.2.19 EXAMINATION CREDIT REPORT

- (a) The credit report shall include a comparison between:
  - (i) the modules, sub-modules, subjects and knowledge levels contained in IS 2.6.1.7 to this Part, as applicable; and
  - (ii) (the syllabus of the technical qualification concerned relevant to the particular category being sought.

This comparison shall state if compliance is demonstrated and contain the justifications for each statement.

- (b) Credit for examinations, other than basic knowledge examinations carried out in maintenance training organizations approved in accordance with Part 3, can only be granted by the Authority by which the qualification has been obtained.
- (c) No credit can be granted unless there is a statement of compliance against each module and submodule, stating where, in the technical qualification, the equivalent standard can be found.
- (d) The Authority shall check on a regular basis whether (i) the national qualification standard or (ii) IS 2.6.1.7 to this Part have changed and assess if changes to the credit report are consequently required. Such changes shall be documented, dated and recorded.

## 2.6.2.20 EXAMINATION CREDIT VALIDITY

- (a) The Authority shall notify to the applicant in writing any credits granted together with the reference to the credit report used.
- (b) Credits shall expire 10 years after they are granted.
- (c) Expiration of the credits, the applicant may apply for new credits. The competent authority shall continue the validity of the credits for an additional period of 10 years without further consideration if basic knowledge requirements defined in IS 2.6.1.7 to this Part have not been changed.

#### SUBPART F - CONTINUING OVERSIGHT

(a) This Subpart describes the procedures for the continuing oversight of the aircraft maintenance license and in particular for the revocation, suspension or limitation of the aircraft maintenance license.

## 2.6.2.21 REVOCATION, SUSPENSION OR LIMITATION OF THE AIRCRAFT MAINTENANCE LICENSE

- (a) The Authority shall suspend, limit or revoke the aircraft maintenance license where it has identified a safety issue or if it has clear evidence that the person has carried out or been involved in one or more of the following activities:
  - 1. obtaining the aircraft maintenance license and/or the certification privileges by falsification of documentary evidence;
  - 2. failing to carry out requested maintenance combined with failure to report such fact to the organization or person who requested the maintenance;
  - failing to carry out required maintenance resulting from own inspection combined with failure to report such fact to the organization or person for whom the maintenance was intended to be carried out;
  - 4. negligent maintenance;
  - 5. falsification of the maintenance record;
  - issuing a certificate of release to service knowing that the maintenance specified on the certificate of release to service has not been carried out or without verifying that such maintenance has been carried out;
  - carrying out maintenance or issuing a certificate of release to service when adversely affected by alcohol or drugs;

Issuing certificate of release to service while not in compliance with Part 5, Part 6 or Part 3.

## 2.6.3 DESIGNATED AVIATION MECHANIC EXAMINERS

#### 2.6.3.1 GENERAL REQUIREMENTS

- (a) Age. An applicant for a designated mechanic examiner shall be at least 23 years of age.
- (b) Medical. There are no medical requirements for a mechanic examiner.
- (c) General eligibility.
  - (1) Show evidence of a high level of aeronautical knowledge in the subject areas for AMT certification in both reciprocating and turbine engine aircraft.
  - (2) Have held a valid AMT certificate with the ratings for which a designation is to issue for five years.
  - (3) Have been actively exercising the privileges of that AMT certificate in the previous three years.
  - (4) Have a good record as an AMT and a person engaged in the industry and community with a reputation for honesty and dependability.
  - (5) The applicant must have for test conducted using the skill test, in accordance with IS 2.6.1.11.
  - (6) The applicant must have a fixed base of operation; equipment and materials must be adequate for an applicant to demonstrate the basic skills of the rating sought.
  - (7) The applicant must have an airworthy aircraft, other aircraft, aircraft subassemblies, operational mock-ups, and other aids that may be used for testing.
  - (8) The applicant must have tools, equipment, material, current publications, and necessary apparatus required to complete a project assignment must be the type recommended by the aircraft manufactures or accepted in the aviation industry.

#### 2.6.3.2 KNOWLEDGE

- (a) The applicant shall pass a pre-designation test on the following:
  - (1) Air Law and Regulations for AMT personnel.
  - (2) Current practices for the fleet of aircraft to be utilised.
  - (3) Best industry practices.
  - (4) Recent improvement in technology, testing and tooling.

#### 2.6.3.3 SKILL

- (a) The applicant shall be observed conducting a complete, actual skill test using the approved Skill Test Standards (STS) in a satisfactory manner.
- (b) The applicant shall be observed completing the required documentation required by the Authority in a satisfactory manner.

#### 2.6.3.4 CURRENCY

- (a) After designation, a Designated Maintenance Technician Examiner shall maintain currency by
- (b) Attending initial and recurrent training conducted by the Authority, and
- (c) Maintaining a current and valid AMT license and applicable ratings.
- (d) The Designated AMT Examiner shall conduct at least 3 skill test during any 12 calendar month period in order to the designation remain current.
(e) The Designated AMT Examiner shall be observed by the Authority in the conduct of skill test at least once each 12 calendar months.

#### 2.6.3.5 PRIVILEGES

(a) The Designated AMT Examiner may conduct AMT skill tests for which he/ she is designated in accordance with the Skill Test Standards as incorporated in IS 2.6.1.11.

#### 2.6.3.6 VALIDITY

(a) The Designated AMT Examiner designation shall be valid for one year.

#### 2.6.3.7 RENEWAL

- (a) The Designated AMT Examiner designation may be renewed by Authority if:
- (b) The need for the designation remains valid.
- (c) The performance of the Desiganted AMT Examiner has been satisfactory.
- (d) The AMT examiner has attended the Designated AMT Examiner training conducted by the Authority in the previous 12 calendar months.

# 2.7 AIR TRAFFIC CONTROLLER LICENSE, CATEGORIES AND RATINGS

#### 2.7.1 APPLICABILITY

(a) This subpart prescribes the requirements for the issue, renewal and reissue of an ATCO license and ratings.

#### 2.7.2 GENERAL

- (a) An applicant shall, before being issued an ATCO license, meet such requirements in respect of age, knowledge, experience, skill, medical fitness and language proficiency as are specified for that license or rating.
- (b) An applicant shall for renewal or re-issue of a license, rating or authorization meet the requirements as are specified for that license, rating or authorization.

#### 2.7.3 AIR TRAFFIC CONTROLLER LICENSE AND RATINGS

#### 2.7.3.1 STUDENT AIR TRAFFIC CONTROLLER

- (a) The authority will take the appropriate measures to ensure that student ATCOs do not constitute a hazard to air navigation.
- (b) MEDICAL FITNESS. The authority will not permit a student ATCO to receive instruction in an operational environment unless that student ATCO holds a current Class 3 medical certificate.
- (c) Have demonstrated competence in the ability to speak and understand the English Language to at least Level 4 of the ICAO Language Proficiency Rating scale.

#### 2.7.3.2 AIR TRAFFIC CONTROLLER LICENSE

- (a) AGE. The applicant for an ATCO license shall be at least 21 years of age.
- (b) MEDICAL. The applicant for an ATCO license shall hold a Class 3 medical certificate issued under this Part.
- (c) KNOWLEDGE. The applicant for an ATCO license shall receive knowledge instruction through an approved training course on the following knowledge areas appropriate to the holder of an ATCO license:
  - (1) AIR LAW:

- (i) Rules and regulations relevant to the ATCO.
- (2) AIR TRAFFIC CONTROL EQUIPMENT:
  - (i) Principles, use and limitations of equipment used in air traffic control.
- (3) GENERAL KNOWLEDGE:
  - Principles of flight; principles of operation and functioning of aircraft, and engines, and systems, and aircraft performances relevant to air traffic control operations.
- (4) HUMAN PERFORMANCE
  - (i) Human performance, including principles of threat and error management;
- (5) METEOROLOGY:
  - Aeronautical meteorology, use and appreciation of meteorological documentation and information, origin and characteristics of weather phenomena affecting flight operations and safety, altimetry.
- (6) NAVIGATION:
  - (i) Principles of air navigation, principle, limitation and accuracy of navigation systems and visual aids; and
- (7) OPERATIONAL PROCEDURES:
  - (i) Air traffic control, communication, RT and phraseology procedures (routine, nonroutine and emergency), use of the relevant aeronautical documentation, safety practices associated with flight.
- (d) KNOWLEDGE TESTING. The applicant for an ATCO license shall:
  - (1) Have received an endorsement for the knowledge test from an authorized instructor who:
    - (i) Conducted the training on the knowledge areas; and
    - (ii) Certifies that the person is prepared for the required knowledge test; and
  - (2) Pass the required knowledge test.
- (e) EXPERIENCE.
  - (1) The applicant shall have completed an approved training course and demonstrated the required competence, having accomplished not less than 3 months of satisfactory service engaged in the actual control of air traffic under the supervision of an ATC OJTI. The experience requirements specified for air traffic controller ratings in 2.7.3.3 of this part will be credited as part of the experience specified in this paragraph.
  - (2) An air traffic controller acting as an ATC OJTI shall hold an appropriate rating and be qualified as an ATC OJTI.
- (f) VALIDITY. Subject to compliance with the requirements specified in this Part, the validity period of the license is 2 years.

#### 2.7.3.3 AIR TRAFFIC CONTROLLER RATINGS

- (a) ATCO ratings shall comprise the following categories:
  - (1) Aerodrome control rating;
  - (2) Approach control procedural rating ;
  - (3) Approach control surveillance rating ;
  - (4) Approach precision radar control rating ;
  - (5) Area control procedural rating; and

- (6) Area control surveillance rating.
- (b) KNOWLEDGE. The applicant for an ATCO rating shall receive knowledge instruction through an approved training course on the knowledge areas appropriate to the holder of an ATCO rating on the subjects as specified below for each rating sought:
  - (1) Aerodrome control rating:
    - (i) Aerodrome layout. physical characteristics and visual aids;
    - (ii) Airspace structure;
    - (iii) Applicable rules, procedures and source of information;
    - (iv) Air navigation facilities;
    - (v) Air traffic control equipment and its use;
    - (vi) Terrain and prominent landmarks;
    - (vii) Characteristics of air traffic;
    - (viii) Weather phenomena;
    - (ix) Emergency and search and rescue plans.
  - (2) Approach control procedural and area control procedural ratings:
    - (i) Airspace structure;
    - (ii) Applicable rules, procedures and source of information;
    - (iii) Air navigation facilities;
    - (iv) Air traffic control equipment and its use;
    - (v) Terrain and prominent landmarks;
    - (vi) Characteristics of air traffic and traffic flow;
    - (vii) Weather phenomena;
    - (viii) Emergency and search and rescue plans.
  - (3) Approach control surveillance, approach precision radar control and area control surveillance ratings.
    - (i) The applicant shall meet the requirements specified in paragraph 2.7.3.3(b)(2) of this subsection insofar 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:
      - (A) Principles, use and limitations of applicable ATS surveillance systems and associated equipment; and
      - (B) Procedures for the provision of ATS surveillance services, as appropriate, including procedures to ensure appropriate terrain clearance.
- (c) KNOWLEDGE TESTING. The applicant for an ATCO rating shall:
  - (1) Have received an endorsement for the knowledge test from an authorized instructor who:
    - (i) Conducted the training on the knowledge areas; and
    - (ii) Certifies that the person is prepared for the required knowledge test; and
  - (2) Pass the required knowledge test.
- (d) EXPERIENCE.
  - (1) The applicant for an ATCO license shall have:

- (i) Satisfactorily completed an approved training course;
- (ii) Provided, satisfactorily, under the supervision of an appropriately rated air traffic controller::
- (A) Aerodrome control rating: an aerodrome control service, for a period of not less than 90 hours or one month, whichever is greater, at the unit for which the rating is sought;
- (B) Approach control procedural, approach control surveillance, area control procedural or area control surveillance rating: the control service for which the rating is sought, for a period of not less than 180 hours or three months, whichever is greater, at the unit for which the rating is sought; and
- (C) Approach precision radar control rating: not less than 200 precision approaches of which not more than 100 shall have been carried out on a radar simulator approved for that purpose by the Licensing Authority. Not less than 50 of those precision approaches shall have been carried out at the unit and on the equipment for which the rating is sought; and
- (iii) if the privileges of the approach control surveillance rating include surveillance radar approach duties, the experience shall include not less than 25 plan position indicator approaches on the surveillance equipment of the type in use at the unit for which the rating is sought and under the supervision of an appropriately rated controller.
- (2) The application for a rating shall have been completed within the 6-month period immediately preceding application shall be specified in 2.7.3.3(d)(1)(ii).
- (3) When the applicant already holds an air traffic controller rating in another category, or the same rating for another unit, the Authority shall determine whether the experience requirement can be reduced, and if so, to what extent.
- (e) SKILL. The applicant shall have demonstrated by passing the required skill test, at a level appropriate to the privileges being granted, the skill, judgment and performance required to provide a safe, orderly and expeditious control service, including the recognition and management of threats and errors.
- (f) PRIVILEGES AND LIMITATIONS.
  - (1) Subject to compliance with the requirements specified in this Part, the privileges of the holder of an ATCO license with the following applicable rating(s) shall be:
    - (i) Aerodrome control rating: to provide or to supervise the provision of aerodrome control service for the aerodrome for which the license holder is rated.
    - (ii) Approach control procedural rating: to provide or to supervise the provision of approach control service for the aerodrome or aerodromes for which the license holder is rated, within the airspace or portion thereof, under the jurisdiction of the unit providing approach control service.
    - (iii) Approach control surveillance rating: to provide and/or supervise the provision of approach control service with the use of applicable ATS surveillance systems for the aerodrome or aerodromes for which the license holder is rated, within the airspace or portion thereof, under the jurisdiction of the unit providing approach control service.

Note: Subject to compliance with the provisions of paragraph 2.7.3.3 (d)(1)(iii) of this subsection, the privileges shall include the provision of surveillance radar approaches.

(iv) Approach precision radar control rating: to provide and/or supervise the provision of precision approach radar service at the aerodrome for which the license holder is rated; and

- (v) Area control procedural rating: to provide and/or supervise the provision of area control service within the control area or portion thereof, for which the license holder is rated.
- (vi) Area radar control surveillance rating: to provide and/or supervise the provision of area control service with the use of an ATS surveillance system, within the control area or portion thereof, for which the license holder is rated.
- (2) Before exercising the privileges indicated in paragraph 2.7.3.3(f)(1)of this subsection, the license holder shall be familiar with all pertinent and current information.
- (3) A holder of an ATCO license and ratings(s) shall not provide instruction in an operational environment unless the license holder has received proper authorization from the Authority.
- (g) VALIDITY OF RATINGS. A rating shall become invalid when an ATCO has ceased to exercise the privileges of the rating for a period of 6 months. A rating shall remain invalid until the controller's ability to exercise the privileges of the rating has been re-established.

#### 2.7.4 DESIGNATED ATCO EXAMINERS

#### 2.7.4.1 REQUIREMENTS AND SKILL TEST

- (a) Age. An applicant for a designated ATCO examiner shall be at least 21 years of age.
- (b) Medical. An applicant for a designated ATCO examiner shall have a Class 3 medical certificate.
- (c) (General eligibility. An applicant for a designated ATCO examiner shall:
  - (1) Hold at least the license and/or class/type ratings as applicable for which examining authority is sought;
  - (2) Hold at least the instructor ratings for which examining authority is sought or be serving in a comparable position as a check ATCO or comparable position in an Approved Training Organization;
  - (3) Have a reputation for integrity and dependability in the industry and the community;
  - (4) Have a good record as a ATCO and an instructor in regards to accidents, incidents, and violations; and
  - (5) Have air traffic controller license/ratings that have never been revoked for falsification or forgery;
  - (6) (Consistently shown satisfactory performance in the provision of Air Traffic Services.
- (d) The ATCO recommended for approval as Examiner shall be known for his / her impartiality, free from prejudices and strong likes and dislikes and capable of recording just and fair assessment.
- (e) The ATCO recommended for approval as Examiner shall be capable of instilling high standard of discipline in

the profession.

- (f) The ATCO once approved as Examiner may be disqualified by the Authority if subsequently found lacking in any of the aforesaid qualities. Besides, the Chief of Air Traffic Management and the Chief of ATC Training from the concerned organization may recommend to the Authority the disqualification of an Examiner ATCO giving adequate justification.
- (g) In case adequate numbers of ATCOs meeting fully the criteria in this Part are not available, the Authority may in its discretion enpanel the appropriate skills of several ATCOs to conduct the complete testing of candidates as necessary.

- (h) Knowledge: The applicant for a designated ATCO examiner shall complete a designated training course in air traffic services and the current ATC ratings in the relevant air traffic control units i.e Tower, Area, Approach, Approach Radar and Area Radar, as relevant, for the specific area for which designation is sought.
- (i) Skill test. The applicant for a designated ATCO examiner shall undergo check by the Authority nominated ATCO examiner for proficiency as ATCO examiner before granting approval.
- (j) Maintaining currency. After designation, a designated ATCO examiner shall maintain currency by:
  - (1) Attending initial and recurrent training provided by the Authority, and
  - (2) Maintain a current and valid:
    - (i) ATC license, and if applicable, class/type ratings appropriate to the designation; and
    - (ii) Class 3 medical certificate.
- Privileges. Subject to compliance with the requirements specified in this Part, the privileges of the examiner's designation are to conduct skill tests and proficiency checks for a license and rating(s) as listed below;
  - (i) To conduct skill test for issue and renewal of ATC ratings;
  - (ii) Training of Instructor / Examiner ATCO candidates; and
  - (iii) To exercise privileges of an ATCO Instructor.
- (I) Validity. Subject to compliance with the requirements specified in this Part, the validity period of an examiner's designation is 3 years from the date of approval unless suspended / withdrawn earlier by the Authority.
- (m) Renewal.
  - (1) Renewal will be at the discretion of the Authority.
  - (2) The renewal for approval of Designated ATCO Examiner shall also be subject to check by the Authority nominated Designated Examiner.
- (n) Additional designations. When the Authority deems it necessary for a designated ATCO examiner to receive additional designations, the designated ATCO examiner:
  - (3) Shall meet all the requirements in this Part for the designation;

#### 2.7.4.2 MINIMUM EXPERIENCE REQUIREMENTS

- (a) Experience ATCO Examiner:
  - (i) Total ATC experience of 5 years, having current procedural Tower, Approach and Area Control Centre ratings for approval as Procedural Examiner ATCO.
  - (ii) Total ATC experience of 8 years and having Current Radar ratings including proficiency in Radar Data Processing System and Flight Data Processing System for automated systems where applicable for approval as Radar Examiner ATCO.
  - (iii) Current Experience as an Instructor ATCO in the relevant ATC unit/s for 2 years at the specific station for which the approval is sought.

Note: Other qualifications being equal, preference will be given to the ATCOs who have held the ATC ratings for more than one station.

#### 2.7.5 DESIGNATED ATCO INSTRUCTOR

#### 2.7.5.1 REQUIREMENTS AND SKILL TEST

- (a) Age. An applicant for a designated ATCO Instructor shall be at least 21 years of age.
- (b) Medical. An applicant for a designated ATCO Instructor shall have a Class 3 medical certificate.

- (c) General eligibility. An applicant for a designated ATCO Instructor shall:
  - (1) Hold at least the license and/or class/type ratings as applicable for which examining authority is sought;
  - (2) Hold at least the instructor rating endorsement for which examining authority is sought or be serving in a comparable position as an check ATCO or comparable position in an Approved Training Organization;
  - (3) Have a reputation for integrity and dependability in the industry and the community;
  - (4) Have a good record as a ATCO in regard to accidents, incidents, and violations; and
  - (5) Have air traffic controller license/ratings that have never been revoked for falsification or forgery;
  - (6) Consistently shown satisfactory performance in the provision of Air Traffic Services.
- (d) The ATCO recommended for approval as Instructor shall be known for his / her impartiality, free from prejudices and strong likes and dislikes and capable of recording just and fair assessment.
- (e) The ATCO recommended for approval as Instructor shall be capable of instilling high standard of discipline in the profession.
- (f) The ATCO once approved as Instructor may be disqualified by Authority if subsequently found lacking in any of the aforesaid qualities. Besides, the Chief of Air Traffic Management and the Chief of ATC Training from the concerned organization may recommend to the Authority the disqualification of an ATCO Instructor giving adequate justification.
- (g) In case adequate number of ATCOs meeting fully the criteria laid down in this Part are not available, the Authority may in its discretion enpanel the appropriate skills of several ATCOs to conduct the complete testing of candidates as necessary.
- (h) Knowledge: The applicant for a designated ATCO Instructor shall complete a designated training course in air traffic services and the current ATC ratings in the relevant air traffic control units i.e Tower, Area, Approach, Approach Radar and Area Radar, as relevant, for the specific area for which designation is sought.
- (i) Skill test. The applicant for a designated ATCO Instructor shall undergo check by Authority nominated Examiner ATCO for proficiency as Instructor ATCO before granting approval.
- (j) Maintaining currency. After designation, a designated ATCO Instructor shall maintain currency by:
  - (1) Attending initial and recurrent training provided by the Authority, and
  - (2) Maintain a current and valid:
    - (i) ATC license, and if applicable, class/type ratings appropriate to the designation; and
    - (ii) Class 3 medical certificate.
- Privileges. Subject to compliance with the requirements specified in this Part, the privileges of the examiner's designation are to conduct skill tests and proficiency checks for a license and rating(s) as listed below;

Instructor

- (i) Training of ATCOs for issue and renewal of ATC ratings.
- (ii) To evaluate and assess the required level of competence of air traffic controllers undergoing On-the-Job Training.
- (iii) To conduct proficiency checks of ATCOs who already hold the ATC rating;
- (iv) To monitor performance of ATCOs.
- (I) Validity. Subject to compliance with the requirements specified in this Part, the validity period of an Instructor's designation is 3 years from the date of approval unless suspended / withdrawn earlier by the Authority.

- (m) Renewal.
  - (1) Renewal will be at the discretion of the Authority.
  - (2) The renewal for approval of Designated ATCO Instructor shall also be subject to check by the Authority nominated Designated Instructor.
- (n) Additional designations. When the Authority deems it necessary for a designated ATCO Instructor to receive additional designations, the designated ATCO Instructor:
  - (1) Shall meet all the requirements in this Part for the designation;

#### 2.7.5.2 MINIMUM EXPERIENCE REQUIREMENTS

Experience ATCO Instructor:

- (i) Total ATC experience of 2 years, having current procedural Tower, Approach or Area Control Centre ratings for approval as Procedural Instructor ATCO;
- (ii) Total ATC experience of 5 years having Current Radar ratings including proficiency in Radar Data Processing System and Flight Data Processing Systems for automated systems where applicable, for approval as Radar Instructor ATCO.

Note: Other qualifications being equal, preference will be given to the ATCOs who have held the ATC ratings for more than one station.

# 2.8 FLIGHT OPERATIONS OFFICER LICENSE, INSTRUCTORS, AND DESIGNATED EXAMINERS

Note: The flight operations officer license can also be specified as flight dispatcher license

#### 2.8.1 APPLICABILITY

(a) This subpart prescribes the requirements for the issue, renewal and re-issue of an FOO license, instructors for FOO licenses and designation of FOO examiner.

#### 2.8.2 GENERAL

- (a) An applicant shall, before being issued with a FOO license, meet such requirements in respect of age, knowledge, experience, skill, medical fitness and language proficiency as are specified for that license.
- (b) An applicant shall for renewal or re-issue of a license meet the requirements as are specified for that license.
- (c) An applicant shall demonstrate the ability to read, write, speak, and understand the language of Sint Maarten, and English if required by the Authority.

#### 2.8.3 VALIDATION FOR A FLIGHT OPERATIONS OFFICER LICENSE

#### 2.8.3.1 GENERAL REQUIREMENTS FOR VAILDATION

- (a) AGE. The applicant for an FOO license shall be at least 21 years of age.
- (b) KNOWLEDGE. The applicant for a FOO license shall receive and log training from an authorized instructor on the following subjects appropriate to the privileges of the FOO:
  - (1) AIR LAW:
    - (i) Rules and regulations relevant for operational control and to the holder of an FOO license;

- (ii) Appropriate ATS practices and procedures.
- (2) AIRCRAFT GENERAL KNOWLEDGE:
  - (i) Principles of operation of aeroplane powerplants, systems and instruments;
  - (ii) Operating limitations of aeroplanes and powerplants;
  - (iii) MEL and configuration deviation list;
- (3) FLIGHT PERFORMANCE CALCULATION, PLANNING PROCEDURES AND LOADING:
  - (i) Effects of loading and mass distribution on aircraft performance and flight characteristics, mass and balance calculations;
  - Operational flight planning, fuel consumption and endurance calculations, alternate airport selection procedures, en-route cruise control, extended range operation;
  - (iii) Take-off performance including field length, climb, and obstacle criteria and limitation;
  - (iv) Cruise performance including minimum altitudes, decompression/engine out/gear down scenario planning;
  - Landing performance including approach climb and field length criteria and limitations;
  - (vi) Preparation and filing ATS flight plans;
  - (vii) Basic principles of computer-assisted planning systems.
- (4) HUMAN PERFORMANCE:
  - (i) Human performance relevant to operational control duties, including principles of threat and error management.
- (5) METEOROLOGY:
  - (i) Aeronautical meteorology, the movement of pressure systems, the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions.
  - (ii) Interpretation and application of aeronautical meteorological reports, charts and forecasts, codes and abbreviations, use of, and procedures for obtaining, meteorological information.
- (6) NAVIGATION:
  - (i) Principles of air navigation with particular reference to instrument flight.
- (7) OPERATIONAL PROCEDURES:
  - (i) Use of aeronautical documentation and standard operating procedures;
  - (ii) Operational procedures for the carriage of freight and dangerous goods;
  - (iii) Procedures relating to aircraft accidents and incidents, emergency flight procedures;
  - (iv) Procedures relating to unlawful interference and sabotage of aircraft;
- (8) PRINCIPLES OF FLIGHT:
  - (i) Principles of flight relating to the appropriate category of aircraft.
- (9) RT.
  - (i) Procedures for communicating with aircraft and relevant ground stations.
- (c) KNOWLEDG TESTING. The applicant for an FOO license shall:
  - (1) Have received an endorsement for the knowledge test from an authorized instructor who:

- (i) Conducted the training on the knowledge areas; and
- (ii) Certifies that the person is prepared for the required knowledge test.
- (2) Pass the required knowledge test.
- (d) EXPERIENCE.
  - (1) The applicant for an FOO license shall have:
    - A total of 2 years' of service in any one or in any combination of the capacities specified in paragraphs 2.8.3.1(d)(1)(i)(A) to (C) of this subsection, inclusive, provided that in any combination of experience the period serviced in any capacity shall be at least one year:
      - (A) A flight crewmember in air transportation; or
      - (B) A meteorologist in an organization providing operational control to aircraft in air transportation; or
      - (C) An ATCO; or a technical supervisor of FOOs or air transportation flight operations systems;or
    - (ii) At least one year as an assistant in the dispatching of air transport;or
    - (iii) Satisfactorily completed a course of approved training.
  - (2) The applicant shall have served under the supervision of an FOO for at least 90 working days within the 6 months immediately preceding the application.
- (e) SKILL. The applicant shall have demonstrated the ability, by passing a skill test on the subjects listed in the CAA STSs for FOO, to:
  - (1) Identify and to retrieve aeronautical data and other information relevant for the analysis of operational situations and risks;
  - (2) Identify and evaluate the risk factors and the possible consequences for flight operations;
  - (3) Identify and evaluate actions considering risk, the effect on flight safety and regularity of the operation;
  - (4) Determine an appropriate course of action based on the responsibilities and policies described in the OM;
  - (5) Apply appropriate standard and non-standard procedures from the OM for the initiation, planning, continuation, diversion, or termination of flights in the interest of safety of the aircraft and regularity and efficiency of the operation;
  - (6) Make an accurate and operationally acceptable weather analysis;, provide an operationally valid briefing on weather conditions of a specific air route, forecast weather trends pertinent to air transportation with particular reference to destination and alternates.
  - (7) Identify and apply operational limitations and minimums in relation to the weather, aircraft status, and appropriate navigation procedures;
  - (8) Determine the optimum flight path for a given segment and create accurate manual and/or computer-generated flight plans.
  - (9) 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 FOO license; and
  - (10) Recognize and manage threats and errors.
- (f) PRIVILEGES. Subject to compliance with the requirements specified in this Part, the privileges of the holder of a FOO license shall be to serve in that capacity with responsibility for each area for which the applicant meets the Standards specified in ICAO Annex 6, as contained in Parts 8 and 9 of these regulations.

- (g) VALIDITY. The validity period of the license is 5 years. A license shall become invalid when an FOO has ceased to exercise the privileges of the license for a period of 6 months. A license shall remain invalid until the FOO's ability to exercise the privileges of the license has been re-established.
- (h) RENEWAL. The FOO License may be renewed by presenting to the Authority evidence of successfully passing a competency check on the areas of operation listed in the CAA STSs for FOO.
- (i) REISSUE. If the FOO License has expired, the applicant shall have received refresher training acceptable to the Authority, and shall pass a skill test on the areas of operation contained in the CAA STSs for FOO.

#### 2.8.3.2 SKILL TEST FOR THE FLIGHT OPERATIONS OFFICER LICENSE

(a) The CAA STSs for FOO contain the list of operations included in the FOO license skill test.

#### 2.8.4 INSTRUCTORS FOR FLIGHT OPERATIONS OFFICERS

#### 2.8.4.1 REQUIREMENTS FOR THE FLIGHT OPERATIONS OFFICER INSTRUCTOR LICENSE

- (a) AGE. An applicant for FOO instructor license and rating shall be at least 21 years of age.
- (b) KNOWLEDGE.
  - (1) An applicant for an FOO instructor license shall have met the instructor requirements in 2.2.6 of this part; and
  - (2) Any additional requirements as may be specified by the Authority.
- (c) EXPERIENCE. The applicant for a FOO instructor license shall hold at least a current and valid FOO license and shall have a minimum of three years of experience as an FOO.
- (d) PRIVILEGES. The privileges of an FOO instructor license are to give instruction to FOO license applicants and to endorse those applicants for a knowledge or skill test as applicable.
- (e) VALIDITY. Subject to compliance with the requirements specified in this Part, the validity period of the FOO instructor license is 2 years.
- (f) RENEWAL. An FOO instructor license that has not expired may be renewed for an additional 24 calendar months if the holder presents to the Authority evidence that the holder has within the past 12 months preceding the expiry date:
  - (1) Conducted at least six exercises in an approved course for an FOO license; or
  - (2) Received refresher training acceptable to the Authority.
- (g) REISSUE. If the FOO instructor license has expired, the applicant shall have received refresher training acceptable to the Authority.

#### 2.8.5 RESERVED

## 2.9 AERODROME FLIGHT INFORMATION SERVICE OFFICER

#### 2.9.1 APPLICABILITY

(a) This subpart prescribes the requirements for the issue, renewal or re-issue of an Aerodrome flight information service officer license.

#### 2.9.2 GENERAL

(a) An applicant shall, before being issued with an Aerodrome flight information service officer license, meet such requirements in respect of age, knowledge, experience, skill, medical fitness and language proficiency as are specified for that license.

(b) An applicant shall for renewal or re-issue of a license, rating or authorization meet the requirements as are specified for that license.

#### 2.9.3 AERODROME FLIGHT INFORMATION SERVICE OFFICER LICENSE

- (a) AGE. The applicant for an Aerodrome flight information service officerlicense shall be at least 18 years of age.
- (b) KNOWLEDGE. The applicant for an Aerodrome flight information service officer license shall receive and log ground training from an authorized instructor on the following subjects appropriate to the privileges of an Aerodrome flight information service officer:
  - (1) GENERAL KNOWLEDGE. ATS provided within Sint Maarten.
  - (2) OPERATIONAL PROCEDURES. R procedures, phraseology, telecommunication network.
  - (3) RULES AND REGULATIONS. Rules and regulations applicable to the Aerodrome flight information service officer; and
  - (4) TELECOMMUNICATION EQUIPMENT. Principles, use and limitations of telecommunication equipment in an Aerodrome flight information service.
- (c) KNOWLEDGE TESTING. An applicant for an Aerodrome flight information service officerlicense shall:
  - (1) Have received an endorsement for the knowledge test from an authorized instructor who:
    - A. Conducted the training on the knowledge areas; and
    - B. Certifies that the person is prepared for the required knowledge test.
  - (2) Pass the required knowledge test.
- (d) EXPERIENCE. The applicant for Aerodrome flight information service officerlicense shall have:
  - (1) Satisfactorily completed an approved training course within the 12-month period immediately preceding application, and shall have served satisfactorily under a qualified Aerodrome flight information service officerfor not less than 2 months; or
  - (2) Satisfactorily served under a qualified Aerodrome flight information service officer for not less than 6 months during the 12-month period immediately preceding application.
- (e) SKILL. The applicant for an Aerodrome flight information service officer license shall demonstrate, or shall have demonstrated, competency in:
  - (1) Operating the telecommunication equipment in use; and
  - (2) Transmitting and receiving RT messages with efficiency and accuracy.
- (f) Privileges. Subject to compliance with the requirements specified in this Part, the privileges of the holder of an Aerodrome flight information service officerlicense shall be to act as an operator in an Aerodrome flight information service. Before exercising the privileges of the license, the holder shall be familiar with all pertinent and current information regarding the types of equipment and operating procedures used at that Aerodrome flight information service.
- (g) Validity: The validity period of the license is 2 years. A license shall become invalid when an Aerodrome flight information service officerhas ceased to exercise the privileges of the license for a period of 6 months. A license shall remain invalid until the Aerodrome flight information service officer's ability to exercise the privileges of the license has been re-established.
- (h) Renewal. An Aerodrome flight information service officer license that has not expired may be renewed for an additional two years if the holder presents to the Authority evidence that the holder has within the past year preceding the expiry date:
  - (1) Be actively engaged in the duties of an Aerodrome flight information service officer, or
  - (2) Received refresher training acceptable to the Authority.

(i) Reissue. If the Aerodrome flight information service officerlicense has expired, the applicant shall have received refresher training acceptable to the Authority.

Note: the SMCAA issues the afiso license for Saba and St. Eustatius and the Netherlands has recognized Sint maarten as the competent issuing authority of these licenses.

#### 2.9.3.1 DESIGNATED AFISO INSTRUCTOR

#### 2.9.3.2 REQUIREMENTS AND SKILL TEST

- (a) Age. An applicant for a designated AFISO Instructor shall be at least 21 years of age.
- (b) Medical. An applicant for a designated AFISO Instructor shall have a Class 3 medical certificate.
- (c) General eligibility. An applicant for a designated AFISO Instructor shall:
  - (1) Hold at least the license and/or class/type ratings as applicable for which examining authority is sought;
  - (2) Hold at least the instructor rating endorsement for which examining authority is sought or be serving in a comparable position as an check AFISO or comparable position in an Approved Training Organization;
  - (3) Have a reputation for integrity and dependability in the industry and the community;
  - (4) Have a good record as a AFISO in regard to accidents, incidents, and violations; and
  - (5) Have aerodrome flight information service or air traffic controller license/ratings that have never been revoked for falsification or forgery;
  - (6) Consistently shown satisfactory performance in the provision of Aerodrome Flight Information Services or Air Traffic Services.
- (d) The AFISO recommended for approval as Instructor shall be known for his / her impartiality, free from prejudices and strong likes and dislikes and capable of recording just and fair assessment.
- (e) The AFISO recommended for approval as Instructor shall be capable of instilling high standard of discipline in the profession.
- (f) The AFISO once approved as Instructor may be disqualified by Authority if subsequently found lacking in any of the aforesaid qualities. Besides, the airport manager from the concerned organization may recommend to the Authority the disqualification of an AFISO Instructor giving adequate justification.
- (g) In case adequate number of AFISOs meeting fully the criteria laid down in this Part are not available, the Authority may in its discretion enpanel the appropriate skills of several AFISOs to conduct the complete testing of candidates as necessary.
  - (1) Knowledge: The applicant for a designated AFISO Instructor shall complete a designated training course in Aerodrome Flight Information Services or Air Traffic Services and the current AFIS or ATC ratings in the relevant air traffic control units in the specific area for which designation is sought.
- (h) Skill test. The applicant for a designated AFISO Instructor shall undergo check by Authority Nominated Examiner for proficiency as Instructor AFIS or ATCO before granting approval.
- (i) Maintaining currency. After designation, a designated AFISO Instructor shall maintain currency by:
  - (1) Attending initial and recurrent training provided by the Authority, and
  - (2) Maintain a current and valid:
    - (i) AFISO or ATCO license, and if applicable, class/type ratings appropriate to the designation; and
    - (ii) Class 3 medical certificate.
    - (iii) Privileges. Subject to compliance with the requirements specified in this Part, the privileges of the examiner's designation are to conduct skill tests and proficiency checks for a license and rating(s) as listed below;

- (iv) Instructor
- (v) Training of AFISOs for issue and renewal of AFIS ratings.
- (vi) To evaluate and assess the required level of competence of air traffic controllers undergoing On-the-Job Training.
- (vii) To conduct proficiency checks of AFISOs who already hold the ATC rating;
- (viii) To monitor performance of AFISOs.
- (j) Validity. Subject to compliance with the requirements specified in this Part, the validity period of an Instructor's designation is 3 years from the date of approval unless suspended / withdrawn earlier by the Authority.
- (k) Renewal.
  - (1) Renewal will be at the discretion of the Authority.
  - (2) The renewal for approval of Designated ATCO Instructor shall also be subject to check by the Authority nominated Designated Instructor.
- (I) Additional designations. When the Authority deems it necessary for a designated ATCO Instructor to receive additional designations, the designated ATCO Instructor:
  - (1) Shall meet all the requirements in this Part for the designation;

#### 2.9.3.3 MINIMUM EXPERIENCE REQUIREMENTS

Experience AFISO Instructor:

- (a) (i) Total ATC/AFIS experience of 2 years,
- 2.9.4 RESERVED

### 2.10 RESERVED

- 2.10.1.1 RESERVED
- 2.10.1.2 RESERVED
- 2.10.1.3 RESERVED
- 2.10.1.4 RESERVED
- 2.10.1.5 RESERVED
- 2.10.1.6 RESERVED
- 2.10.1.7 RESERVED
- 2.10.1.8 RESERVED
- 2.10.1.9 RESERVED
- 2.10.1.10 RESERVED
- 2.10.1.11 RESERVED
- 2.10.1.12 RESERVED
- 2.10.1.13 RESERVED
- 2.10.1.14 RESERVED

#### 2.10.2 RESERVED

- 2.10.2.1 RESERVED
- 2.10.2.2 RESERVED

#### 2.10.3 RESERVED

- 2.10.3.1 RESERVED
- 2.10.3.2 RESERVED
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- 2.10.3.4 RESERVED
- 2.10.3.5 RESERVED
- 2.10.3.6 RESERVED
- 2.10.3.7 RESERVED

# 2.11 MEDICAL PROVISIONS FOR LICENSING

#### 2.11.1.1 APPLICABILITY

(a) This subpart prescribes the requirements and procedures for issuing, renewing and reissuing Class 1, Class 2 and Class 3 medical certificates.

- (b) The medical assessment process of license holders shall include basic safety management principles in its:
  - (1) Routine analysis of in-flight incapacitation events and medical findings during medical assessments to identify areas of increased medical risk; and
  - (2) Continuous re-evaluation of the medical assessment process to concentrate on identified areas of increased medical risk.
- (c) The Authority will implement appropriate aviation-related health promotion for license holders subject to a medical assessment to reduce future medical risks to flight safety.

Note: Paragraph 2.11.1.1(b) of this part indicates how appropriate topics for health promotion activities may be determined.

#### 2.11.1.2 MEDICAL FITNESS

- (a) The applicants for a flight crew license, AMT or ATCO license shall hold a medical certificate issued in accordance with this Part.
- (b) Except as provided in this part, flight crew members, AMT and ATCO's shall not exercise the privileges of their license unless they hold a current medical certificate appropriate to the license.

#### 2.11.1.3 CIVIL AVIATION MEDICAL EXAMINERS

- (a) Subject to compliance with the requirements specified in this Part, the Authority may designate qualified and licensed physicians in the practice of medicine to be authorized as an AME and to conduct medical examinations of fitness of applicants for the issue, renewal or re-issue of the licenses or ratings specified in this Part. AMEs may be designated outside of Sint Maarten.
- (b) AMEs shall have had, or shall receive initial and recurrent training in aviation medicine. Initial training shall include:
  - (1) Basic training in aviation medicine for Class 2 and 3 medical examinations on the subjects prescribed in IS 2.11.1.3(a); and
  - (2) Advanced training in aviation medicine for Class 1 medical examinations on the subjects prescribed in IS 2.11.1.3(b).
- (c) AMEs shall acquire knowledge and experience of the conditions in which the holders of licenses and ratings carry out their duties;
- (d) The AME shall be required to submit sufficient information to the Authority to enable the Authority to undertake medical certificate audits.
- (e) The authorization of an AME is valid for 3 years. The AME shall have completed at least 10 examinations for a medical certificate per year. Renewal of the AME designation will be at the discretion of the Authority.
- (f) Having completed the medical examination of an applicant in accordance with 2.11 of this part, the AME shall submit a signed report to the Authority, detailing the results of the examination.
- (g) If the medical examination is carried out by a constituted group of AMEs, the head of the group will be appointed by the Authority, which will be responsible for coordinating the results of the examination and signing the report.
- (h) The Authority retains the right to reconsider any action of a AME.
- (i) The AME shall respect medical confidentiality at all times.
- (j) The AME shall securely hold all medical reports and records with accessibility restricted to authorized personnel.
- (k) The AME designation may be suspended or revoked, if the AME does not conform with the above criteria under (d), (e), (f), (i), (j), or when concerns have arisen during the execution of their tasks.

#### 2.11.1.4 CIVIL AVIATION MEDICAL EXAMINATIONS

- (a) Applicants for licenses or ratings for which medical fitness is prescribed shall sign and furnish to the medical examiner a declaration stating whether they have previously undergone such an examination and, if so, the date, place and results of the last examination.
- (b) The applicant shall indicate to the medical examiner whether a medical certificate has previously been refused, revoked or suspended and, if so, the reason for such refusal, revocation or suspension.
- (c) Each applicant for a medical certificate shall provide the medical examiner with a personally certified statement of medical facts concerning personal, familial and hereditary history.
- (d) Each applicant for a medical certificate shall produce proof of identification as specified in paragraph 2.2.5.5(c) of this part.
- (e) Any false declaration made to a medical examiner made by an applicant for a license or rating shall be reported to the Authority for such action as may be considered appropriate.
- (f) The applicant shall complete the appropriate application form as prescribed by the Authority.

#### 2.11.1.5 SPECIAL CIRCUMSTANCES

- (a) If the medical requirements prescribed in this part for a particular license are not met, the appropriate medical certificate will not be issued, renewed or re-issued unless the following conditions are fulfilled:
  - An accredited medical conclusion indicates that in special circumstances the applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the license applied for is not likely to jeopardize flight safety;
  - (2) Operational conditions and the relevant ability, skill and experience of the applicant have been given due consideration; and
  - (3) The license is endorsed by the Authority with any special limitation or limitations when the safe performance of the license holder's duties is dependent on compliance with such limitation or limitations.
- (b) The AME shall report to the Authority any individual case where, in the AME's judgment, an applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the license being applied for, or held, is not likely to jeopardize flight safety.

#### 2.11.1.6 DECREASE OF MEDICAL FITNESS

(a) Holders of licenses provided for in this Part shall not exercise the privileges of their licenses and related ratings at any time when they are aware of any decrease in their medical fitness which might render them unable to safely and properly exercise these privileges.

#### 2.11.1.7 USE OF PSYCHOACTIVE SUBSTANCES

- (a) Holders of licenses provided for in this Part shall not exercise the privileges of their licenses and related ratings while under the influence of any psychoactive substance which might render them unable to safely and properly exercise these privileges.
- (b) Holders of licenses provided for in this Part shall not engage in any problematic use of substances.

#### 2.11.1.8 MEDICAL CERTIFICATE

- (a) THE MEDICAL CERTIFICATE:
  - (1) The medical certificate shall be:
    - (i) Issued in a form and manner prescribed by the Authority; and
    - (ii) Carried in the possession of the personnel license holder at all times while exercising the privileges of a personnel license.

- (2) The items required on the medical certificate are prescribed in IS 2.11.1.8
- (b) ISSUE OF MEDICAL CERTIFICATES.
  - (1) A medical certificate will be issued to any applicant who meets the medical requirements prescribed in this Subpart, based on medical examination and evaluation of the applicant's history and condition.
    - (i) The issue of the Class 1 medical certificate may be specifically delegated to a AME.
    - (ii) The issue of Class 2 and Class 3 medical certificates may be delegated to any authorized AME.
  - (2) Each applicant for a medical certificate shall undergo a medical examination based on the physical and mental requirements contained in this Subpart.
  - (3) Any applicant who does not meet the medical requirements of this Subpart may apply for the discretionary issuance of a certificate under 2.11.1.5 of this part.
- (c) VALIDITY:
  - (1) The validity period of the medical certificate shall be:
    - (i) 12 months for the Class 1 for the CPL, MPL, and ATPL.
    - (ii) 12 months for the Class 2 for the FE and FN.
    - (iii) 48 months for the Class 2 for the PPL.
    - (iv) 12 months for the Class 3 for the ATCO license and AMT; and
    - (v) 48 months for, rotorcraft,
  - (2) The exceptions for the validity period of the medical certificate are:
    - (i) When the holders have passed their 40th birthday:
      - (A) The 48-month interval specified for the PPL license shall be reduced to 24 month and the 12<sup>th</sup> month interval specified for the ATCO license shall be reduced to 6 months; and
      - (B) The 12-month interval specified for the holder of a CPL, MPL and ATPL shall be reduced to 6 months;
      - (C) the 24-month interval specified for the PPL shall be reduced to 12 months;
  - (3) For initial issuance of the medical certificate, the period of validity shall begin on the date the medical examination is performed. The period of validity shall for the last month counted, include the day that has the same calendar number as the date of the medical examination or, if that month has no day with that number, the last day of that month.
  - (4) The period of validity of a medical certificate may be extended up to 45 days at the discretion of the Authority.

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

- (5) The period of validity of a medical certificate may be reduced when clinically indicated.
- (d) RENEWAL OR REISSUE OF A MEDICAL CERTIFICATE.
  - (1) The requirements to be met for the renewal or reissue of a medical certificate are the same as those for the initial certificate except where otherwise specifically stated.
  - (2) The renewal of the Class 1, 2 and 3 medical certificates may be delegated to the AME.

- (3) The reissue of the Class 1 medical certificate will be either done by the Authority or specifically delegated to a AME.
- (4) Reissue of the Class 2 and 3 medical certificates may be delegated to a AME.
- (e) LIMITATION OR DENIAL.
  - (1) The Authority may, for medical reasons justified and notified to the applicant, limit or deny a medical certificate.
- (f) SUSPENSION OR REVOCATION OF A MEDICAL CERTIFICATE.
  - (1) The Authority may in accordance with 2.2.9 of this part, suspend or revoke a medical certificate issued, if it is established that an applicant or a certificate holder has not met, or no longer meets, the requirements of this part.

#### 2.11.1.9 MEDICAL ASSESSOR

- (a) The CAA medical assessor will periodically evaluate the competence of each AME.
- (b) The Authority will use the services of physicians experienced in the practice of aviation medicine when it is necessary to evaluate reports submitted to the Authority by medical examiners.

#### 2.11.2 MEDICAL REQUIREMENTS

#### 2.11.2.1 GENERAL

- (a) An applicant for a Medical Certificate issued in accordance with this Part, shall undergo a medical examination based on the following requirements:
  - (1) Physical and mental;
  - (2) Visual and color perception; and
  - (3) Hearing.

#### 2.11.2.2 PHYSICAL AND MENTAL REQUIREMENTS

- (a) An applicant for any class of medical certificate shall be required to be free from:
  - (1) Any abnormality, congenital or acquired; or
  - (2) Any active, latent, acute or chronic disability; or
  - (3) Any wound, injury or sequelae from operation; or
  - (4) Any effect or side-effect of any prescribed or non-prescribed therapeutic medication taken; such as would entail a degree of functional incapacity that is likely to interfere with the safe operation of an aircraft or with the safe performance of duties.
- (b) An applicant with depression, being treated with antidepressant medication, shall 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 license and rating privileges.

#### 2.11.2.3 VISUAL ACUITY TEST REQUIREMENTS

- (a) Visual acuity tests shall be conducted in an environment with a level of illumination that corresponds to ordinary office illumination (30-60cd/m<sup>2</sup>).
- (b) Visual acuity shall be measured by means of a series of Landolt rings or similar optotypes, placed at a distance from the applicant appropriate to the method of testing adopted.

#### 2.11.2.4 COLOR PERCEPTION REQUIREMENTS

- (a) The applicant shall be required to demonstrate the ability to perceive readily those colors the perception of which is necessary for the safe performance of duties.
- (b) The applicant shall be tested for the ability to correctly identify a series of pseudoisochromatic plates in daylight or in artificial light of the same color temperature such as that provided by CIE standard illuminants C or D65 as specified by the International Commission of Illumination (CIE).
- (c) An applicant obtaining a satisfactory result as prescribed by the Authority shall be assessed as fit. An applicant failing to obtain a satisfactory result in such a test shall be assessed as unfit unless able to readily distinguish the colors used in air navigation and correctly identify aviation-colored lights. Applicants who fail to meet these criteria shall be assessed as unfit except for Class 2 assessment with the following restriction: valid daytime only.

#### 2.11.2.5 HEARING TEST REQUIREMENTS

- (a) Applicants shall be required to demonstrate hearing performance sufficient for the safe exercise of their license and rating privileges.
- (b) The hearing test may be conducted using a pure tone audiometer or alternate method that will provide equivalent results. This test shall be performed at the first medical examination and then at specified intervals according to the class of medical examination and the age of the applicant.
- (c) If a pure tone audiometer is used for the hearing test, the reference zero for calibration shall be that of the ISO Recommendation R389, 1964.
- (d) For hearing tests where audiometry is not performed, applicants shall be tested in a quiet room by whispered and spoken voice tests under the following conditions.
  - (1) A quiet room is a room in which the intensity of the background noise is less than 35 dB(A) when measured on "slow" response of an "A"-weighted sound level meter.
  - (2) the sound level of an average conversational voice at 1 m from the point of output is 60dB(A) and that of a whispered voice is 45dB(A). At 2 m from the speaker, the sound is 6 dB(A) lower.
- (e) The holder of a PPL with an IR shall meet the hearing requirements for the Class 1 medical certificate.

#### 2.11.2.6 CLASS 1 MEDICAL CERTIFICATE

- (a) CERTIFICATE ISSUE AND RENEWAL
  - (1) The level of medical fitness to be met for the renewal of a Class 1 medical certificate shall be the same as that for the initial assessment except where otherwise specifically stated.
  - (2) An applicant for a CPL, and MPL, or an ATPL shall undergo an initial medical examination for the issue of a Class 1 Medical Certificate.
  - (3) Except where otherwise stated in this subpart, the holder of a CPL, an MPL, or an ATPL shall have that holder's Class 1 medical certificate renewed at intervals not exceeding those specified below.
  - (4) A Class 1 medical certificate will be issued when the applicant complies with the requirements of this Part.
- (b) PHYSICAL AND MENTAL REQUIREMENTS
  - (1) The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable either to operate an aircraft safely or to perform assigned duties safely.
  - (2) The applicant shall have no established medical history or clinical diagnosis of any of the following such as might render the applicant unable to safely exercise the privileges of the license applied for or held:

- (i) An organic mental disorder;
- A mental or behavioral disorder due to use of psychoactive substances, this induces dependence syndrome induced by alcohol or other psychoactive substances;
- (iii) Schizophrenia or a schizotypal or delusional disorder;
- (iv) A mood (affective) disorder;
- (v) A neurotic, stress-related or somatoform disorder;
- A disorder of adult personality or behavior, particularly if manifested by repeated overt acts;
- (vii) Mental retardation;
- (viii) A disorder of psychological development;
- (ix) A behavioral or emotional disorder, with onset in childhood or adolescence; or
- (x) A mental disorder not otherwise specified.
- (3) The applicant shall have no established medical history or clinical diagnosis of any of the following:
  - A progressive or non-progressive disease of the nervous system, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's license and rating privileges;
  - (ii) Epilepsy; or
  - (iii) Any disturbance of consciousness without satisfactory medical explanation of cause.
- (4) An applicant who has suffered any head injury, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's license and rating privileges shall be assessed as unfit.
- (5) An applicant shall not possess any abnormality of the heart, congenital or acquired, that is likely to interfere with the safe exercise of the applicant's license and rating privileges. A history of proven myocardial infarction shall be disqualifying.
- (6) An applicant who has undergone coronary by-pass grafting or angioplasty (with or without stenting) or other cardiac intervention or who has a history of myocardial infarction or who suffers from any other potentially incapacitating cardiac condition shall be assessed as unfit unless the applicant's cardiac condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's license or rating privileges.
- (7) An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been investigated and evaluated in accordance with the safe exercise of the applicant's license or rating privileges.
- (8) Electrocardiography shall form part of the heart examination for the first issue of a medical certificate.
- (9) Electrocardiography shall be included in re-examination of applicants over the age of 50 at least annually.

Note 1: The purpose of routine electrocardiography is case finding. It does not provide sufficient evidence to justify disqualification without further thorough cardiovascular investigation.

- (10) The systolic and diastolic blood pressures shall be within normal limits.
- (11) 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 is compatible with the safe exercise of the applicant's license and rating privileges.

- (12) There shall be no significant functional or structural abnormality of the circulatory system.
- (13) There shall be no acute disability of the lungs or any active disease of the structures of the lungs, mediastinum or pleura likely to result in incapacitating symptoms during normal or emergency operations.
- (14) Radiography shall form a part of the initial chest examination.

Note: Periodic chest radiography is usually not necessary but may be a necessity in situations where asymptomatic pulmonary disease can be expected.

- (15) An applicant 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 license or rating privileges.
- (16) An applicant with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit.
- (17) 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 license and rating privileges.
- (18) An applicant with active pulmonary tuberculosis shall be assessed as unfit.
- (19) An applicant with quiescent or healed lesions which are known to be tuberculous, or are presumably tuberculous in origin, may be assessed as fit.
- (20) An applicant with significant impairment of the function of the gastrointestinal tract or its adnexa shall be assessed as unfit.
- (21) An applicant shall be completely free from those hernias that might give rise to incapacitating symptoms.
- (22) An applicant with sequela of disease of, or surgical intervention on any part of the digestive tract or its adnexa, likely to cause incapacity in flight, in particular any obstructions due to stricture or compression shall be assessed as unfit.
- (23) An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexa, with a total or partial excision or a diversion of any of these organs shall be assessed as unfit until such time as the medical authority designated for the purpose by Sint Maarten and having access to the details of the operation concerned considers that the effects of the operation are not likely to cause incapacity in flight.
- (24) An applicant with metabolic, nutritional or endocrine disorders likely to interfere with the safe exercise of the applicant's license and rating privileges shall be assessed as unfit.
- (25) An applicant with insulin-treated diabetes mellitus shall be assessed as unfit.
- (26) An applicant 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 license and rating privileges.
- (27) An applicant with disease of the blood and/or the lymphatic system shall be assessed as unfit unless adequately investigated and the applicant's condition is found unlikely to interfere with the safe exercise of the applicant's license and rating privileges.

Note: Sickle cell trait or other haemoglobinopathic traits are usually compatible with a fit assessment.

(28) An applicant with renal or genitourinary disease shall be assessed as unfit, unless adequately investigated and the applicant's condition is found unlikely to interfere with the safe exercise of the applicant's license and rating privileges.

- (29) Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.
- (30) An applicant with sequelae of disease or surgical procedures on the kidneys or the genitourinary tract, in particular any 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 license or rating privileges.
- (31) An applicant who has undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.
- (32) An applicant who is seropositive for HIV shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed as not likely to interfere with the safe exercise of the applicant's license or rating privileges.

Note: Early diagnosis and active management of HIV disease with antiretroviral therapy reduces morbidity and improves prognosis and thus increases the likelihood of a fit assessment.

- (33) An applicant who is pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk, uncomplicated pregnancy. The fit assessment period may be limited from the end of the 12th week until the end of the 26th week of gestation.
- (34) Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her license until she has undergone re-evaluation in accordance with best medical practice and has been assessed as fit to safely exercise the privileges of her license and ratings.
- (35) The applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures that is likely to interfere with the safe exercise of the applicant's license and rating privileges.

Note: Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.

- (36) The applicant shall not possess any abnormality or disease of the ear or related structures that is likely to interfere with the safe exercise of the applicant's license and rating privileges.
- (37) There shall be:
  - (i) No disturbance of vestibular function;
  - (ii) No significant dysfunction of the Eustachian tubes; and
  - (iii) No unhealed perforation of the tympanic membranes.
- (38) A single dry perforation of the tympanic membrane need not render the applicant unfit.
- (39) There shall be no nasal obstruction and no malformation nor disease of the buccal cavity or upper respiratory tract that is likely to interfere with the safe exercise of the applicant's license and rating privileges.
- (40) An applicant with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.
- (c) VISUAL REQUIREMENTS
  - (1) The function of the eyes and their adnexae shall be normal. There shall be no active pathological condition, acute or chronic, or any sequelae of surgery or trauma of the eyes or their adnexae likely to reduce proper visual function to an extent that would interfere with the safe exercise of the applicant's license and rating privileges.

- (2) Distant visual acuity with or without correction shall be 6/9 or better in each eye separately, and binocular visual acuity shall be 6/6 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that:
  - (i) Such correcting lenses are worn during the exercise of the privileges of the license or rating applied for or held; and
  - (ii) In addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant's license.

Note 1: Paragraph 2.11.2.6(c)(2) of this subsection is the subject of Standards in ICAO Annex 6, Part 1.

Note 2: An applicant accepted as meeting these provisions is deemed to continue to do so unless there is reason to suspect otherwise, in which case an ophthalmic report is required at the discretion of the Authority. Both uncorrected and corrected visual acuity are normally measured and recorded at each re-examination. Conditions which indicate a need to obtain an ophthalmic report include: a substantial decrease in the uncorrected visual acuity; any decrease in best-corrected visual acuity, and the occurrence of eye disease, eye injury or eye surgery.

- (3) An applicant may use contact lenses to meet the requirement of paragraph 2.11.2.6(c) (2) of this subsection, provided that:
  - (i) The lenses are monofocal and non-tinted;
  - (ii) The lenses are well tolerated; and
  - (iii) A pair of suitable correcting spectacles is kept readily available during the exercise of the license privileges.

Note: Applicants who use contact lenses may not need to have their uncorrected visual acuity measured at each re-examination provided the history of their contact lens prescription is known.

(4) An applicant with a large refractive error shall use contact lenses or high-index spectacle lenses.

Note: If spectacles are used, high-index lenses are needed to minimize peripheral field distortion.

(5) An applicant whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be required to provide a full ophthalmic report prior to the initial medical certificate and every 5 years thereafter.

Note 1: The purpose of the required ophthalmic examination is 1) to ascertain normal visual performance and 2) to identify any significant pathology.

- (6) An applicant who has undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless the applicant is free from those sequelae which are likely to interfere with the safe exercise of the applicant's license and rating privileges.
- (7) An applicant shall have the ability to read, while wearing the correcting lenses, if any, the N5 chart or its equivalent at a distance selected by that applicant in the range of 30 to 50 cm and the ability to read the N14 chart or its equivalent at a distance of 100 cm. If this requirement is met only by the use of near correction, the applicant may be assessed as fit provided that this near correction is added to the spectacle correction already prescribed in accordance with this paragraph; if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the license. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

Note 1: Any applicant who needs near correction to meet this requirement will require "look-over", bifocal or perhaps multifocal lenses in order to read the instruments and a chart or manual held in the hand, and also to make use of distant vision, through the windscreen, without removing the

lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) significantly reduces distant visual acuity and is therefore not acceptable.

Note 2: Whenever there is a requirement to obtain or renew correcting lenses, an applicant is expected to advise the refractionist of reading distances for the visual flight deck tasks relevant to the types of aircraft in which the applicant is likely to function.

- (8) When near correction is required in accordance with paragraph 2.11.2.6(c) of this subsection, a second pair of near-correction spectacles shall be kept available for immediate use.
- (9) The applicant shall be required to have normal fields of vision.
- (10) The applicant shall be required to have normal binocular function.
- (11) Reduced stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia may not be disqualifying.
- (d) HEARING REQUIREMENTS.
  - (1) The applicant shall be tested by pure-tone audiometry.
    - (i) At the initial medical examination.
    - (ii) At least once every five years up to the age of 40 years.
    - (iii) At least once every three years after the age of 40 years.
  - (2) An applicant shall not have a hearing loss in either ear separately, of more than 35 dB at any of the frequencies 500, 1 000 or 2 000 Hz, or more than 50 dB at 3 000 Hz. However, an applicant with a hearing loss greater than the above may be declared fit provided that:
    - (i) 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
    - (ii) The applicant has the ability to hear an average conversational voice in a quiet room, using both ears, at a distance of 2 m from the examiner, with the back turned to the examiner.
  - (3) Alternatively, a practical hearing test conducted in flight in the flight deck of an aircraft of the type for which the applicant's license and ratings are valid may be used.

#### 2.11.2.7 CLASS 2 MEDICAL CERTIFICATE

- (a) CERTIFICATE ISSUE AND RENEWAL.
  - (1) An applicant for a PPL, an FE, or an FN license shall undergo an initial medical examination for the issue of a Class 2 Medical Certificate.
  - (2) Except where otherwise stated in this subpart, holders of a PPL, a FE or a FN license shall have their Class 2 Medical Certificate renewed at intervals not exceeding those specified in this subpart.
  - (3) A Class 2 Medical Certificate will be issued when the applicant complies with the requirements of this part.
- (b) PHYSICAL AND MENTAL REQUIREMENTS.
  - (1) The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable either to operate an aircraft safely or to perform assigned duties safely.
  - (2) The applicant shall have no established medical history or clinical diagnosis of any of the following such as might render the applicant unable to safely exercise the privileges of the license applied for or held:
    - (i) An organic mental disorder;

- A mental or behavioral disorder due to the use of psychoactive substances; this includes dependence syndrome induced by alcohol or other psychoactive substances;
- (iii) Schizophrenia or a schizotypal or delusional disorder;
- (iv) A mood (affective) disorder;
- (v) A neurotic, stress-related or somatoform disorder;
- (vi) A disorder of adult personality or behavior, particularly if manifested by repeated overt acts;
- (vii) Mental retardation;
- (viii) A disorder of psychological development;
- (ix) A behavioral or emotional disorder, with onset in childhood or adolescence; or
- (x) A mental disorder not otherwise specified.
- (3) An applicant with depression, being treated with antidepressant medication, shall 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 license and rating privileges.

Note : Mental and behavioral disorders are defined in accordance with the clinical descriptions and diagnostic guidelines of the World Health Organization as given in the International Statistical Classification of Diseases and Related Health Problems, 10th Edition – Classification of Mental and Behavioral Disorders, WHO 1992. This document contains detailed descriptions of the diagnostic requirements, which may be useful for their application to medical assessment.

- (4) The applicant shall have no established medical history or clinical diagnosis of any of the following:
  - A progressive or non-progressive disease of the nervous system, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's license and rating privileges;
  - (ii) Epilepsy; or
  - (iii) Any disturbance of consciousness without satisfactory medical explanation of cause.
- (5) An applicant who has suffered any head injury, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's license and rating privileges shall be assessed as unfit.
- (6) The applicant shall not possess any abnormality of the heart, congenital or acquired, that is likely to interfere with the safe exercise of the applicant's license and rating privileges. A history of proven myocardial infarction shall be disqualifying.
- (7) An applicant who has undergone coronary by-pass grafting or angioplasty (with or without stenting) or other cardiac intervention or who has a history of myocardial infarction or who suffers from any other potentially incapacitating cardiac condition shall be assessed as unfit unless the applicant's cardiac condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's license or rating privileges.
- (8) An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's license or rating privileges.

- (9) Electrocardiography shall form part of the heart examination for the first issue of a medical certificate:
  - (i) After the age of 40; and
  - (ii) In re-examinations every two years after the age of 50.

Note 1: The purpose of routine electrocardiography is case finding. It does not provide sufficient evidence to justify disqualification without further thorough cardiovascular investigation.

- (10) The systolic and diastolic blood pressures shall be within normal limits.
- (11) 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 is compatible with the safe exercise of the applicant's license and rating privileges.
- (12) There shall be no significant functional or structural abnormality of the circulatory system.
- (13) There shall be no acute disability of the lungs or any active disease of the structures of the lungs, mediastinum or pleura likely to result in incapacitating symptoms during normal or emergency operations.
  - (i) Radiography shall form a part of the initial chest examination.

Note: Periodic chest radiography is usually not necessary but may be a necessity in situations where asymptomatic pulmonary disease can be expected.

- (14) An applicant 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 license or rating privileges.
- (15) An applicant with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit.
- (16) 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 license and rating privileges.
- (17) An applicant with active pulmonary tuberculosis shall be assessed as unfit.
- (18) An applicant with quiescent or healed lesions which are known to be tuberculous, or are presumably tuberculous in origin, may be assessed as fit.
- (19) An applicant with significant impairment of the function of the gastrointestinal tract or its adnexae shall be assessed as unfit.
- (20) The applicant shall be completely free from those hernias that might give rise to incapacitating symptoms.
- (21) An applicant with sequelae of disease of, or surgical intervention on any part of the digestive tract or its adnexae, likely to cause incapacity in flight, in particular any obstructions due to stricture or compression shall be assessed as unfit.
- (22) An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexae, with a total or partial excision or a diversion of any of these organs, shall be assessed as unfit until such time as the medical authority designated for the purpose by Sint Maarten and having access to the details of the operation concerned considers that the effects of the operation are not likely to cause incapacity in flight.
- (23) An applicant with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of the applicant's license and rating privileges shall be assessed as unfit.
- (24) An applicant with insulin-treated diabetes mellitus shall be assessed as unfit.

- (25) An applicant 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 license and rating privileges.
- (26) An applicant with diseases of the blood and/or the lymphatic system shall be assessed as unfit unless adequately investigated and the condition is found unlikely to interfere with the safe exercise of the applicant's license and rating privileges.

Note: Sickle cell trait or other haemoglobinopathic traits are usually compatible with a fit assessment.

- (27) An applicant with renal or genitor-urinary disease shall be assessed as unfit, unless adequately investigated and their condition found unlikely to interfere with the safe exercise of the applicant's license and rating privileges.
- (28) Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.
- (29) An applicant with sequelae of disease or surgical procedures on the kidneys or the genitourinary tract, in particular any 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 license or rating privileges.
- (30) An applicant who has undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.
- (31) An applicants who is seropositve for HIV shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed as not likely to interfere with the safe exercise of the applicant's license or rating privileges.

Note 1: Early diagnosis and active management of HIV disease with antiretroviral therapy reduces morbidity and improves prognosis and thus increases the likelihood of a fit assessment.

- (32) An applicant who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk, uncomplicated pregnancy.
- (33) For an applicant with a low-risk uncomplicated pregnancy, evaluated and supervised in accordance with paragraph 2.11.2.7(b)(32) of this subsection, 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.
- (34) Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her license until she has undergone re-evaluation in accordance with best medical practice and has been assessed as fit to safely exercise the privileges of her license and ratings.
- (35) The applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures that is likely to interfere with the safe exercise of the applicant's license and rating privileges.

Note: Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.

- (36) The applicant shall not possess any abnormality or disease of the ear or related structures that is likely to interfere with the safe exercise of the applicant's license and rating privileges.
- (37) There shall be:
  - (i) No disturbance of vestibular function;
  - (ii) No significant dysfunction of the Eustachian tubes; and

- (iii) No unhealed perforation of the tympanic membranes.
- (38) A single dry perforation of the tympanic membrane need not render the applicant unfit.
- (39) There shall be no nasal obstruction and no malformation nor disease of the buccal cavity or upper respiratory tract that is likely to interfere with the safe exercise of the applicant's license and rating privileges.
- (40) An applicant with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.
- (c) VISUAL REQUIREMENTS
  - (1) The function of the eyes and their adnexae shall be normal. There shall be no active pathological condition, acute or chronic, or any sequelae of surgery or trauma of the eyes or their adnexae likely to reduce proper visual function to an extent that would interfere with the safe exercise of the applicant's license and rating privileges.
  - (2) Distant visual acuity with or without correction shall be 6/12 or better in each eye separately, and binocular visual acuity shall be 6/9 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that:
    - (i) Such correcting lenses are worn during the exercise of the privileges of the license or rating applied for or held; and
    - (ii) In addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant's license.

Note: An applicant accepted as meeting these provisions is deemed to continue to do so unless there is reason to suspect otherwise, in which case an ophthalmic report is required at the discretion of the Authority. Both uncorrected and corrected visual acuity are normally measured and recorded at each re-examination. Conditions which indicate a need to obtain an ophthalmic report include: a substantial decrease in the uncorrected visual acuity; any decrease in best-corrected visual acuity, and the occurrence of eye disease, eye injury or eye surgery.

- (3) An applicant may use contact lenses to meet the requirement of paragraph 2.11.2.7(c)(2) of this subsection provided that:
  - (i) The lenses are monofocal and non-tinted;
  - (ii) The lenses are well tolerated; and
  - (iii) a pair of suitable correcting spectacles is kept readily available during the exercise of the license privileges.

Note: Applicants who use contact lenses may not need to have their uncorrected visual acuity measured at each re-examination provided the history of their contact lens prescription is known.

(4) An applicant with a large refractive error shall use contact lenses or high-index spectacle lenses.

Note: If spectacles are used, high-index lenses are needed to minimize peripheral field distortion.

(5) An applicant whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be required to provide a full ophthalmic report prior to the initial medical certificate and every 5 years thereafter.

Note 1: The purpose of the required ophthalmic examination is 1) to ascertain normal visual performance and 2) to identify any significant pathology.

(6) An applicant who has undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless the applicant is free from those sequelae which are likely to interfere with the safe exercise of the applicant's license and rating privileges. (7) An applicant shall have the ability to read, while wearing the correcting lenses, if any, the N5 chart or its equivalent at a distance selected by that applicant in the range of 30 to 50 cm. If this requirement is met only by the use of near correction, the applicant may be assessed as fit provided that this near correction is added to the spectacle correction already prescribed in accordance with this paragraph; if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the license. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

Note 1: Any applicant who needs near correction to meet this requirement will require "look-over", bifocal or perhaps multifocal lenses in order to read the instruments and a chart or manual held in the hand, and also to make use of distant vision, through the windscreen, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) significantly reduces distant visual acuity and is therefore not acceptable.

Note 2: Whenever there is a requirement to obtain or renew correcting lenses, an applicant is expected to advise the refractionist of reading distances for the visual flight deck tasks relevant to the types of aircraft in which the applicant is likely to function.

- (8) When near correction is required in accordance with paragraph 2.11.2.7(c) of this subsection, a second pair of near-correction spectacles shall be kept available for immediate use.
- (9) The applicant shall be required to have normal fields of vision.
- (10) The applicant shall be required to have normal binocular function.
- (11) Reduced stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia may not be disqualifying.
- (d) HEARING REQUIREMENTS.
  - (1) The applicant shall be tested by pure-tone audiometry.
    - (i) At the initial medical examination; and
    - (ii) At least once every two years after the age of 50 years.
  - (2) When tested by pure-tone audiometry, an applicant with a hearing loss, in either ear separately, of more than 35 dB at any of the frequencies 500, 1 000 or 2 000 Hz, or more than 50 dB at 3 000 Hz, shall be assessed as unfit.
  - (3) The applicant shall have the ability to hear an average conversational voice in a quiet room, using both ears, at a distance of 2 m from the examiner, with the back turned to the examiner or be assessed as unfit.
  - (4) The applicant who holds a PPL with an IR shall meet the hearing requirements for a Class 1 medical certificate.

#### 2.11.2.8 CLASS 3 MEDICAL CERTIFICATE

- (a) CERTIFICATE ISSUE AND RENEWAL.
  - (1) An applicant for an ATCO and AMT license shall undergo an initial medical examination for the issue of a Class 3 Medical Certificate.
  - (2) Except where otherwise stated in this subpart, holders of an ATCO license and AMT license shall have their Class 3 Medical Certificate renewed at intervals not exceeding those specified in this subpart.
  - (3) A Class 3 Medical Certificate will be issued when the applicant complies with the requirements of this Part.
- (b) PHYSICAL AND MENTAL REQUIREMENTS.

- (1) The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable either to operate an aircraft safely or to perform assigned duties safely.
- (2) The applicant shall have no established medical history or clinical diagnosis of any of the following such as might render the applicant unable to safely exercise the privileges of the license applied for or held:
  - (i) An organic mental disorder;
  - A mental or behavioral disorder due to the use of psychoactive substances; this induces dependence syndrome induced by alcohol or other psychoactive substances;
  - (iii) Schizophrenia or a schizotypal or delusional disorder;
  - (iv) A mood (affective) disorder;
  - (v) A neurotic, stress-related or somatoform disorder;
  - A disorder of adult personality or behavior, particularly if manifested by repeated overt acts;
  - (vii) Mental retardation;
  - (viii) A disorder of psychological development;
  - (ix) A behavioral or emotional disorder, with onset in childhood or adolescence; or
  - (x) A mental disorder not otherwise specified.
- (3) An applicant with depression, being treated with antidepressant medication, shall 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 license and rating privileges.
- (4) The applicant shall have no established medical history or clinical diagnosis of any of the following:
  - A progressive or non-progressive disease of the nervous system, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's license and rating privileges;
  - (ii) Epilepsy; or
  - (iii) Any disturbance of consciousness without satisfactory medical explanation of cause.
- (5) An applicant who has suffered any head injury, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's license and rating privileges shall be assessed as unfit.
- (6) The applicant shall not possess any abnormality of the heart, congenital or acquired, that is likely to interfere with the safe exercise of the applicant's license and rating privileges. A history of proven myocardial infarction shall be disqualifying.
- (7) An applicant who has undergone coronary by-pass grafting or angioplasty (with or without stenting) or other cardiac intervention or who has a history of myocardial infarction or who suffers from any other potentially incapacitating cardiac condition shall be assessed as unfit unless the applicant's cardiac condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's license or rating privileges.
- (8) An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's license or rating privileges.

(9) Electrocardiography shall form part of the heart examination for the first issue of a medical certificate and in re-examinations every two years after the age of 50.

Note 1: The purpose of routine electrocardiography is case finding. It does not provide sufficient evidence to justify disqualification without further thorough cardiovascular investigation.

- (10) The systolic and diastolic blood pressures shall be within normal limits.
- (11) 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 is compatible with the safe exercise of the applicant's license and rating privileges.
- (12) There shall be no significant functional or structural abnormality of the circulatory system.
- (13) There shall be no acute disability of the lungs or any active disease of the structures of the lungs, mediastinum or pleura likely to result in incapacitating symptoms during normal or emergency operations. Radiography shall form a part of the initial chest examination.

Note: Periodic chest radiography is usually not necessary but may be a necessity in situations where asymptomatic pulmonary disease can be expected.

- (14) An applicant 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 license or rating privileges.
- (15) An applicant with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit.
- (16) 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 license and rating privileges.
- (17) An applicant with active pulmonary tuberculosis shall be assessed as unfit.
- (18) An applicant with quiescent or healed lesions which are known to be tuberculous, or are presumably tuberculous in origin, may be assessed as fit.
- (19) An applicant with significant impairment of the function of the gastrointestinal tract or its adnexae shall be assessed as unfit.
- (20) An applicant with sequelae of disease of, or surgical intervention on any part of the digestive tract or its adnexae, likely to cause incapacity in flight, in particular any obstructions due to stricture or compression shall be assessed as unfit.
- (21) An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexae, with a total or partial excision or a diversion of any of these organs shall be assessed as unfit until such time as the medical authority designated for the purpose by Sint Maarten and having access to the details of the operation concerned considers that the effects of the operation are not likely to cause incapacity in flight.
- (22) An applicant with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of the applicant's license and rating privileges shall be assessed as unfit.
- (23) An applicant with insulin-treated diabetes mellitus shall be assessed as unfit.
- (24) 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 license and rating privileges.
- (25) An applicant with diseases of the blood and/or the lymphatic system shall be assessed as unfit unless adequately investigated and their condition found unlikely to interfere with the safe exercise of the applicant's license and rating privileges.

Note: Sickle cell trait or other haemoglobinopathic traits are usually compatible with a fit assessment.

- (26) An applicant with renal or genitor-urinary disease shall be assessed as unfit, unless adequately investigated and their condition found unlikely to interfere with the safe exercise of the applicant's license and rating privileges.
- (27) Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.
- (28) An applicant with sequelae of disease or surgical procedures on the kidneys or the genitourinary tract, in particular any 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 license or rating privileges.
- (29) An applicant who has undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.
- (30) An applicant who is seropositive for HIV shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed as not likely to interfere with the safe exercise of the applicant's license or rating privileges.

Note 1: Early diagnosis and active management of HIV disease with antiretroviral therapy reduces morbidity and improves prognosis and thus increases the likelihood of a fit assessment.

- (31) An applicant who is pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk, uncomplicated pregnancy.
- (32) During the gestational period, precautions shall be taken for the timely relief of an ATCO in the event of early onset of labor or other complications
- (33) For an applicant with a low-risk uncomplicated pregnancy, evaluated and supervised in accordance with paragraph 2.11.2.8(b)(31) of this subsection, the fit assessment shall be limited to the period until the end of the 34th week of gestation.
- (34) Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her license until she has undergone re-evaluation in accordance with best medical practice and has been assessed as fit to safely exercise the privileges of her license and ratings.
- (35) 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 license and rating privileges.

Note: Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.

- (36) The applicant shall not possess any abnormality or disease of the ear or related structures that is likely to interfere with the safe exercise of the applicant's license and rating privileges.
- (37) There shall be no malformation or any disease of the nose, buccal cavity or upper respiratory tract that is likely to interfere with the safe exercise of the applicant's license and rating privileges.
- (38) An applicant with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.
- (c) VISUAL REQUIREMENTS
  - (1) The function of the eyes and their adnexae shall be normal. There shall be no active pathological condition, acute or chronic, or any sequelae of surgery or trauma of the eyes or their adnexae likely to reduce proper visual function to an extent that would interfere with the safe exercise of the applicant's license and rating privileges.

- (2) Distant visual acuity with or without correction shall be 6/9 or better in each eye separately, and binocular visual acuity shall be 6/6 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that:
  - (i) Such correcting lenses are worn during the exercise of the privileges of the license or rating applied for or held; and
  - (ii) In addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant's license.

Note: An applicant accepted as meeting these provisions is deemed to continue to do so unless there is reason to suspect otherwise, in which case an ophthalmic report is required at the discretion of the Authority. Both uncorrected and correct visual acuity are normally measured and recorded at each re-examination. Conditions which indicate a need to obtain an ophthalmic report include: a substantial decrease in the uncorrected visual acuity; any decrease in best-corrected visual acuity, and the occurrence of eye disease, eye injury or eye surgery.

- (3) An applicant may use contact lenses to meet the requirement of paragraph 2.11.2.8 (c) (2) provided that:
  - (i) The lenses are monofocal and non-tinted;
  - (ii) The lenses are well tolerated; and
  - (iii) A pair of suitable correcting spectacles is kept readily available during the exercise of the license privileges.

Note: Applicants who use contact lenses may not need to have their uncorrected visual acuity measured at each re-examination provided the history of their contact lens prescription is known.

(4) Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

Note: If spectacles are used, high-index lenses are needed to minimize peripheral field distortion.

(5) An applicant whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be required to provide a full ophthalmic report prior to the initial Medical Certificate and every five years thereafter.

Note 1: The purpose of the required ophthalmic examination is 1) to ascertain normal visual performance and 2) to identify any significant pathology.

- (6) An applicants who has undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless the applicant is free from those sequelae which are likely to interfere with the safe exercise of the applicant's license and rating privileges.
- (7) An applicant shall have the ability to read, while wearing the correcting lenses, if any, required by paragraph 2.11.2.8(c)(2) of this subsection, the N5 chart or its equivalent at a distance selected by that applicant in the range of 30 to 50 cm and the ability to read the N14 chart or its equivalent at a distance of 100 cm. If this requirement is met only by the use of near correction, the applicant may be assessed as fit provided that this near correction is added to the spectacle correction already prescribed in accordance with (b); if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the license. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

Note 1: Any applicant who needs near correction to meet this requirement will require "look-over", bifocal or perhaps multifocal lenses in order to read the instruments and a chart or manual held in the hand, and also to make use of distant vision, through the windscreen, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) significantly reduces distant visual acuity and is therefore not acceptable.

Note 1: An applicant who needs near correction to meet this requirement will require "look-over," bifocal, or perhaps multifocal lenses in order to read radar screens, visual displays, and written or printed material, and also to make use of distant vision, through the windows, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) may be acceptable for certain air traffic duties. However, it should be realized that single-vision near correction significantly reduces distant visual acuity.

Note 2: Whenever there is a requirement to obtain or renew correcting lenses, an applicant is expected to advise the refractionist of reading distances for air traffic control duties the applicant is likely to perform.

- (8) When near correction is required in accordance with this paragraph 2.11.2.8(c) of this subsection, a second pair of near-correction spectacles shall be kept available for immediate use.
- (9) The applicant shall be required to have normal fields of vision.
- (10) The applicant shall be required to have normal binocular function.

Note: Defective stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia may not be disqualifying.

- (d) HEARING REQUIREMENTS.
  - (1) The applicant shall be tested by pure-tone audiometry.
    - (i) At the initial medical examination;
    - (ii) At least once every four years up to the age of 40 years; and
    - (iii) At least once every two years after the age of 40 years.
  - (2) The applicant, when tested on a pure-tone audiometer, shall not have a hearing loss in either ear separately, of more than 35 dB at any of the frequencies 500, 1 000 or 2 000 Hz, or more than 50 dB at 3 000 Hz.
  - (3) An applicant with a hearing loss greater than the above may be declared fit provided that the applicant has normal hearing performance against a background noise that reproduces or simulates that experience in a normal air traffic control working environment.
  - (4) Alternatively, a practical hearing test conducted in an air traffic control environment representative of the one for which the applicant's license and ratings are valid may be used.

# SINT MAARTEN CIVIL AVIATION REGULATIONS
# PART 2 — IMPLEMENTING STANDARDS

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## PART 2 — IMPLEMENTING STANDARDS

## IS 2.2.2 LANGUAGE PROFICIENCY

#### (a) GENERAL

- (1) To meet the language proficiency requirements contained in 2.2.2 of this part, an applicant for a license or a license holder shall demonstrate, in a manner acceptable to the Authority, compliance with the holistic descriptors in IS 2.2.2 (b) and with the Operational Level (Level 4) of the Language Proficiency Rating Scale as provided in IS 2.2.2(c).
- (b) HOLISTIC DESCRIPTORS. Proficient speakers shall:
  - (1) Communicate effectively in voice-only (telephone/radiotelephone) and in face-to-face situations;
  - (2) Communicate on common, concrete and work-related topics with accuracy and clarity;
  - (3) 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;
  - (4) Handle successfully and with relative ease the linguistic challenges presented by a complication or an unexpected turn of events that occurs within the context of a routine work situation or communicative task with which they are otherwise familiar; and
  - (5) Use a dialect or accent which is intelligible to the aeronautical community.
- (c) RATING SCALE:
  - (1) 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.
  - (2) ELEMENTARY LEVEL (LEVEL 2):
    - 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.
  - (3) PRE-OPERATIONAL LEVEL (LEVEL 3):

- 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.

#### (4) OPERATIONAL LEVEL (LEVEL 4):

- 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 may require clarification strategies.
- 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.
- (5) EXTENDED LEVEL (LEVEL 5):
  - 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 is 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. Managers the speaker/listener relationship effectively.
- (6) EXPERT LEVEL (LEVEL 6):
  - (i) Pronunciation: Pronunciation, stress, rhythm, and intonation, thought 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.

## IS 2.2.3.1 RESERVED

## IS 2.2.4.3 PROCEDURES FOR VALIDATION OF FLIGHTCREW LICENSES BY RELIANCE UPON THE LICENSING SYSTEM OF ANOTHER CONTRACTING STATE

- (a) The Authority will, before making the agreement required any paragraph 2.2.4.3 (a)(3) of this part, be convinced that the other Contracting State issues licenses in conformity with at least the requirements of this part, by conducting a regulatory comparison of the licensing systems and requirements.
- (b) An inspector, legal counsel and/or licensing subject matter experts from Sint Maarten, or from another Contracting State delegated by the Authority of Sint Maarten, must visit the other Contracting State to be convinced that the licensing system in that Contracting State is in conformity with at least the requirements of this part. A report describing the bases for the decision shall be made to the Authority of Sint Maarten. The report, and the regulatory comparison noted in IS 2.2.4.4 (a), shall serve as the basis for a government-to-government agreement between the involved States regarding the use of or reliance on the licensing system.

- (c) An air law test must be arranged if the air law system of Sint Maarten is different from the air law system of the other Contracting State. Other areas that may require knowledge testing are meteorology, operational procedures and RT, if those areas differ between Sint Maarten and the other Contracting State.
- (d) Application for the validation certificate shall be done by submitting to the Authority a properly filled out form, which can be obtained from the Authority.

## IS 2.2.4.4 PROCEDURES FOR CONVERSION OF FLIGHTCREW LICENSES BY RELIANCE UPON THE LICENSING SYSTEM OF ANOTHER CONTRACTING STATE

- (a) The Authority that issues a converted license based on a license from another Contracting State remains responsible for the converted license.
- (b) The Authority will, before making the agreement required by paragraph 2.2.4.4 (a)(3) of this part, be convinced that the other Contracting State issues licenses in conformity with at least the requirements of this part, by conducting a regulatory comparison of the licensing systems and requirements.
- (c) An inspector, legal counsel and/or licensing subject matter experts from Sint Maarten, or from another Contracting State delegated by the Authority of Sint Maarten, must visit the other Contracting State to be convinced that the licensing system in that Contracting State is in conformity with at least the requirements of this part. A report describing the bases for the decision shall be made to the Authority of Sint Maarten. The report, and the regulatory comparison noted in IS 2.2.4.4 (b) shall serve as the basis for a government-to-government agreement between the involved States regarding the use of or reliance of the licensing system.
  - (1) An air law test must be arranged if the air law system of Sint Maarten is different from the air law system of the other Contracting State. Other areas that may require knowledge testing are meteorology, operational procedures and RT, if those areas differ between Sint Maarten and the other Contracting State.
- (d) Renewal and reissue of converted licenses and ratings:
  - (1) when examiners are available in Sint Maarten to perform proficiency checks for the renewal of rating(s) or skill tests for the re-issue of the license or rating(s), these checks/tests will be performed by the authorized examiners of Sint Maarten;
  - (2) when examiners are not available in Sint Maarten to perform proficiency checks for the renewal of the rating(s) or skill tests for the reissue of the license or rating(s), the availability of examiners for these checks/test from the other Contracting State can be arranged in the agreement required by paragraph 2.2.4.4 (a)(3) of this part.
- (e) Application for the conversion of a license from another Contracting State shall be done by submitting to the Authority a properly filled out form, which can be obtained from the Authority.
- (f) The conversion of medical certificates, and/or reliance on medical examinations conducted in the other Contracting State, may also be addressed in the government-to-government agreement between the States.

## IS 2.2.4.9 PROCEDURES FOR VALIDATION OF AVIATION MAINTENANCE TECHNICIAN LICENSES BY RELIANCE UPON THE LICENSING SYSTEM OF ANOTHER CONTRACTING STATE

(a) The Authority will, before making the agreement required by paragraph 2.2.4.9 (a)(3) of this part, be convinced that the other Contracting State issues licenses in conformity with at least the requirements of this part, by conducting a regulatory comparison of the licensing systems and requirements.

- (b) An inspector, legal counsel and/or licensing subject matter experts from Sint Maarten, or from another Contracting State delegated by the Authority of Sint Maarten, must visit the other Contracting State to be convinced that the licensing system in that Contracting State is in conformity with at least the requirements of this part. A report describing the bases for the decision shall be made to the Authority of Sint Maarten. The report, and the regulatory comparison noted in IS 2.2.4.9(a) shall serve the basis for a government-to-government agreement between the involved States regarding the use of or reliance on the licensing system.
- (c) An air Law test must be arranged if the air law system of Sint Maarten is different from the air law system of the other Contracting State. The knowledge test may also include Sint Maarten airworthiness requirements governing certification and continuing airworthiness and AMOs and procedures, if those regulations differ between Sint Maarten and the other Contracting State.
- (d) Application for the validation certificate shall be done by submitting to the Authority a properly filled out form, which can be obtained from the Authority.

## IS 2.2.4.10 PROCEDURES FOR CONVERSION OF AVIATION MAINTENANCE TECHNICIAN LICENSES BY RELIANCE UPON THE LICENSING SYSTEM OF ANOTHER CONTRACTING STATE

- (a) The Authority that issues a converted license based on a license from another Contracting State remains responsible for the converted license.
- (b) The Authority will, before making the agreement required by 2.2.4.10 (a)(3) of this part, be convinced that the other Contracting State issues licenses in conformity with at least the requirements of this part, by conducting a regulatory comparison of the licensing systems and requirements.
- (c) An inspector, legal counsel and/or licensing subject matter experts from Sint Maarten, or from another Contracting State delegated by the Authority of Sint Maarten, must visit the other Contracting State to be convinced that the licensing system in that Contracting State is in conformity with at least the requirements of this part. A report describing the bases for the decision shall be made to the Authority of Sint Maarten. The report, and the regulatory comparison noted in IS 2.2.4.10(b), shall serve as the basis for a government-to-government agreement between the involved States regarding the use of or reliance of the licensing system.
  - (1) An air law test must be arranged if the air law system of Sint Maarten is different from the air law system of the other Contracting State. The knowledge test may also include Sint Maarten airworthiness requirements governing certification and continuing airworthiness and AMOs and procedures, if those regulations differ between Sint Maarten and the other Contracting State.
- (d) Renewal and re-issue of converted licenses and ratings:
  - (1) when examiners are available in Sint Maarten to perform proficiency checks for the renewal of rating(s) or skill tests for the re-issue of the license or rating(s), these tests/checks will be performed by the authorized examiners of Sint Maarten;
  - (2) when examiners are not available in Sint Maarten to perform proficiency checks for the renewal of the rating(s) or skill test for the reissue of the license or rating(s), the availability of examiners for these checks/tests from the other Contracting State can be arranged in the agreement required by 2.2.4.10 (a)(3) of this part.
- (e) Application for the conversion of a license from another Contracting State shall be done by submitting to the Authority a properly filled out form, which can be obtained from the Authority.

## IS 2.2.4.11 RESERVED

## IS 2.2.8 SPECIFICATIONS AND FORMAT OF THE LICENSE

(a) For licenses issued on first quality paper, plastic cards, or other suitable material:

- (1) The following details shall appear on the license and the numbering scheme shall be in Roman numerals:
- (i) Name of Sint Maarten (in bold type);
- (ii) Title of license (in very bold type);
- (iii) Serial number of the license, in Arabic numerals, given by the Authority issuing the license;
- (iv) Photograph of holder
- (v) Name of license holder in full (in Roman alphabet also if script of national language is other than Roman);
- (IVa) Date of birth;
- (vi) Address of license holder;
- (vii) Nationality of license holder;
- (viii) Signature of license holder;

Note: Nationality is presumed to be the citizenship of the license holder.

- (ix) The Authority and, where necessary, conditions under which the license is issued;
- (x) Certification concerning validity and authorization for holder to exercise privileges appropriate to the license;
- (xi) Signature of the officer issuing the license and the date of such issue;
- (xii) Seal or stamp of the authority issuing the license;
- (xiii) Ratings, (e.g. category, class, type of aircraft, airframe, aerodrome control, etc.);
- (xiv) Remarks, (i.e. special endorsements relating to limitations and endorsements for privileges, including from 5 March 2008 an endorsement of language proficiency, and other information required in pursuance to Article 39 of the Chicago Convention); and
- (xv) Any other details desired by the authority issuing the license; and
- (2) The privileges and ratings shall be clearly identified on the license in items (IX) and (XII) of IS 2.2.8(a)(1).
- (b) For electronic licenses:
  - (1) The following details shall appear on the license and the numbering scheme shall be in Roman numerals:
    - (I) Name of Sint Maarten (in bold type);
    - (II) Title of license (in very bold type);
    - (III) Serial number of the license, in Arabic numerals, given by the authority issuing the license;
    - (IV) Photograph of holder;
    - (IVa) Name of holder in full (in Roman alphabet also if script of national language is other than Roman);
    - (IVb) Date of birth;
    - (IVc) Address of license holder if desired by State;
    - (V) Nationality of license holder;

Note: Nationality is presumed to be the citizenship of the license holder.

- (VI) Script signature of license holder;
- (VII) Authority and, where necessary, conditions under which the license is issued;

- (VIII) Certification concerning validity and authorization for holder to exercise privileges appropriate to the license;
- (IX) Digital signature of the officer issuing the license and the date of such issue;
- (IXa) Seal or stamp of the authority issuing the license;
- (IXb) Date and time of last synchronization with the server of the Licensing Authority;
- (IXc) Machine readable code to retrieve authentication data;
- (X) Ratings (e.g., category, class, type of aircraft, airframe, aerodrome control);
- (XI) Remarks (i.e., special endorsements relating to limitations, endorsements for privileges, including an endorsement of language proficiency, and other information required in pursuance to Article 39 of the Chicago Convention); and
- (XII) Any other details desired by the authority issuing the license; and
- (2) The privileges and ratings shall be clearly identified on the license in items (VIII) and (X) of IS 2.2.8(b)(1).

## IS 2.3.1.7 RECORDING OF FLIGHT TIME

- (a) The details in the records of flights flown as pilot shall contain the items listed in IS 2.3.1.7 (b) and (c) below.
- (b) For the purpose of meeting the requirements of 2.3.1.6 of this part, each person shall enter the following information for each flight or lesson logged.
  - (1) Personal details:
    - (i) Name of the license holder;
    - (ii) Address of the license holder.
  - (2) For each flight:
    - (i) Name of the PIC;
    - (ii) Date of the flight;
    - (iii) Place and time of departure and arrival;
    - (iv) Type of aircraft and registration;
  - (3) For each session in an FSTD:
    - (i) Type and qualification number of the FSTD
    - (ii) FSTD instruction
    - (iii) Date
    - (iv) Total time of session.
  - (4) Pilot function:
    - (i) Solo.
    - (ii) PIC.
    - (iii) CP.
    - (iv) Dual.
    - (v) FI.
- (c) Logging of flight time.
  - (1) Logging of solo flight time:
    - (i) A student pilot may log as solo flight time only that flight time when the pilot is the sole occupant of the aircraft.

- (2) Logging of PIC flight time:
  - (i) The applicant or the holder of a pilot license may log as PIC time all that flight time during which that person is:
    - (A) The sole manipulator of the controls of an aircraft for which the pilot is rated; and
    - (B) Acting as PIC 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.
  - (ii) An authorized instructor may log as PIC time all of the flight time while acting as an authorized instructor.
  - (iii) A student pilot may log as PIC time all solo flight time and flight time as student PIC, provided that such time is countersigned by the instructor.
- (3) Logging of CP time:
  - (i) A person may log CP time only when occupying a pilot seat as CP in 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.
- (4) Logging of instrument flight time:
  - (i) A person may log instrument flight time only for that flight when the person operates the aircraft solely by reference to instruments under actual or simulated instrument flight conditions.
- (5) Logging instruction time:
  - (i) A person may log instruction time when that person receives training from an authorized instructor in an aircraft or an FSTD.
  - (ii) The instruction time shall be logged in a record (e.g. logbook) and shall be endorsed by the authorized instructor.

## IS 2.3.2.5 CATEGORY II AND III AUTHORIZATION

- (a) The Authority will issue a CAT II or CAT III pilot authorization by letter, as a part of an applicant's IR or ATPL.
- (b) Upon original issue the authorization will contain the following limitations:
  - (1) For CAT II operations, 1,600 ft RVR and 150 ft DH; and
  - (2) For CAT III operations, as specified in the authorization document.
- (c) To remove the limitations on a CAT II or CAT III pilot authorization:
  - (1) A CAT II limitation holder may remove the limitation by showing that, since the beginning of the sixth preceding month, the holder has made three Category II ILS approaches with a 150-foot decision height to a landing under actual or simulated instrument conditions; or
  - (2) A CAT III limitation holder may remove the limitation by showing experience as specified in the authorization.
- (d) An authorization holder or an applicant for an authorization may use a flight simulator or flight training device if it is approved by the Authority for such use, to meet the experience requirement of paragraph 2.3.2.5(c) of this part, or for the practical test required by this part for a CAT II or a CAT III pilot authorization, as applicable.
- (e) CAT II: SKILL TEST REQUIREMENTS.
  - (1) An applicant for the following authorizations shall pass a skill test:
    - (i) Issuance or renewal of a CAT II pilot authorization.

- (ii) The addition of another type aircraft to a CAT II pilot authorization.
- (2) To be eligible for the skill test for an authorization under 2.3.2.5 of this part, an applicant shall:
  - (i) Meet the requirements of 2.3.2.5 of this part; and
  - (ii) If the applicant has not passed a skill test for this authorization during the 12 calendar months preceding the month of the test the applicant shall:
    - (A) Meet the requirements of 8.4.1.10 of these regulations; and
    - (B) Have performed at least six ILS approaches during the 6 calendar months preceding the month of the test, of which at least three of the approaches shall have been conducted without the use of an approach coupler.
- (3) An applicant shall accomplish the approaches specified in IS 2.3.2.5(e)(2)(ii)(B):
  - (i) Under actual or simulated instrument flight conditions;
  - To the minimum DH for the ILS approach in the type aircraft in which the practical test is to be conducted, except that the approaches need not be conducted to the DH authorized for CAT II operations;
  - (iii) To the DH authorized for CAT II operations only if conducted in an approved flight simulator or an approved flight training device; and
  - (iv) 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 FSTD 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 ATO certificated under Part 3 of these regulations.
- (4) The flight time acquired in meeting the requirements of paragraph (e)(2)(ii)(B) of this subsection may be used to meet the requirements of IS 2.3.2.5(e)(2)(ii)(A).
- (f) CAT II: SKILL TEST PROCEDURES. The skill test consists of an oral increment and a flight increment.
  - (1) ORAL INCREMENT. In the oral increment of the practical test an applicant shall demonstrate knowledge of the following:
    - (i) Required landing distance;
    - (ii) Recognition of the DH;
    - (iii) Missed approach procedures and techniques using computed or fixed attitude guidance displays;
    - (iv) Use and limitations of RVR;
    - Use of visual clues, their availability or limitations, and the altitude at which they are normally discernible at reduced RVR readings;
    - Procedures and techniques related to transition from nonvisual to visual flight during a final approach under reduced RVR;
    - (vii) Effects of vertical and horizontal windshear;
    - (viii) Characteristics and limitations of the ILS and runway lighting system;
    - (ix) 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 CAT II equipment;

- (x) Assigned duties of the CP during CAT II approaches, unless the aircraft for which authorization is sought does not require CP; and
- (xi) Instrument and equipment failure warning systems.
- (2) FLIGHT INCREMENT. The following requirements apply to the flight increment of the practical test:
  - (i) The flight increment shall be conducted in an aircraft of the same category and class, and type, as applicable, as the aircraft in which the authorization is sought or in an approved FSTD 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 ATO certificated under Part 3 of these regulations.
  - (ii) The flight increment shall consist of at least two ILS approaches to 100 ft AGL including at least one landing and one missed approach.
  - (iii) 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.
  - (iv) If a multiengine aeroplane 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.
  - (v) If an approved multi-engine FSTD is used for the practical test, the applicant shall execute a missed approach with the most critical engine, if applicable, failed.
  - (vi) For an authorization for an aircraft that requires a type rating, the applicant shall pass a practical test in co-ordination with a CP who holds a type rating in the aircraft in which the authorization is sought.
  - (vii) An inspector or an evaluator may conduct oral questioning at any time during a practical test.
- (g) CAT III: SKILL TEST REQUIREMENTS.
  - (3) The Authority will require that an applicant pass a skill test for:
    - (i) Issuance or renewal of a CAT III pilot authorization;
    - (ii) The addition of another type of aircraft to a CAT III pilot authorization.
  - (4) To be eligible for the skill test an applicant shall:
    - (i) Meet the requirements of 2.3.2.5 of this part; and
    - (ii) If the applicant has not passed a practical test for this authorization during the 12 calendar months preceding the month of the test the applicant shall:
      - (A) Meet the requirements of 8.4.1.10, 8.10.1.20 and 8.10.1.32 of these regulations; and
      - (B) Have performed at least six ILS approaches during the 6 calendar months preceding the month of the test, of which at least three of the approaches shall have been conducted without the use of an approach coupler.
  - (5) An applicant shall conduct the approaches specified in IS 2.3.2.5 (2)(ii)(B)::
    - (i) Under actual or simulated instrument flight conditions;

- (ii) To the alert height or DH for the ILS approach in the type aircraft in which the practical test is to be conducted;
- (iii) Not necessarily to the DH authorized for CAT III operations;
- (iv) To the alert height or DH, as applicable, authorized for CAT III operations only if conducted in an approved flight simulator or approved flight training device; and
- (v) 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:
  - (A) Represents an aircraft of the same category and class, and type, as applicable, as the aircraft for which the authorization is sought; and
  - (B) Is used in accordance with an approved course conducted by an ATO certificated under Part of these regulations.
- (6) KNOWLEDGE REQUIREMENTS: An applicant shall demonstrate knowledge of the following:
  - (i) Required landing distance;
  - (ii) Determination and recognition of the alert height or DH, as applicable, including use of a radar altimeter;
  - (iii) Recognition of and proper reaction to significant failures encountered prior to and after reaching the alert height or DH, as applicable;
  - 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;
  - Use and limitations of RVR, including determination of controlling RVR and required transmissometers;
  - (vi) Use, availability, or limitations of visual cues and the altitude at which they are normally discernible at reduced RVR readings including:
    - (A) Unexpected deterioration of conditions to less than minimum RVR during approach, flare, and rollout;
    - (B) Demonstration of expected visual references with weather at minimum conditions;
    - (C) The expected sequence of visual cues during an approach in which visibility is at or above landing minima; and
    - (D) Procedures and techniques for making a transition from instrument reference flight to visual flight during a final approach under reduced RVR.
  - (vii) Effects of vertical and horizontal windshear;
  - (viii) Characteristics and limitations of the ILS and runway lighting system;
  - (ix) Characteristics and limitations of the flight director system auto approach coupler (including split axis type if equipped), auto throttle system (if equipped), and other CAT III equipment;
  - Assigned duties of the CP during CAT III operations, unless the aircraft for which authorization is sought does not require a CP;
  - (xi) Recognition of the limits of acceptable aircraft position and flight path tracking during approach, flare, and, if applicable, rollout; and
  - (xii) Recognition of, and reaction to, airborne or ground system faults or abnormalities, particularly after passing alert height or decision height, as applicable.

#### (7) FLIGHT SKILL REQUIREMENTS:

- (i) An applicant may conduct the practical 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 ATO certificated under Part 3 of these regulations.
- The practical test shall consist of at least two ILS approaches to 100 feet AGL, including one landing and one missed approach initiated from a very low altitude that may result in a touchdown during the go around manoeuvre;
- The applicant shall perform all approaches during the practical test with the approved automatic landing system or an equivalent landing system approved by the Authority;
- (iv) If a multiengine 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, if applicable, set at idle or zero thrust before reaching the middle or outer marker;
- (v) If an approved multiengine flight simulator or approved multiengine 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;
- (vi) For an authorization for an aircraft that requires a type rating, the applicant shall pass a practical test in co-ordination with a check pilot who holds a type rating in the aircraft in which the authorization is sought; and
- (vii) Subject to the limitations of this paragraph, for CAT IIIB 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;
  - (C) In conditions representative of the most adverse lateral touchdown displacement allowing a safe landing on the runway; and
  - (D) In weather conditions anticipated in CATIIIB operations.
- (8) An inspector or an evaluator may conduct oral questioning at any time during the practical test.

- IS 2.3.3 RESERVED
- IS 2.3.3.2 RESERVED
- IS 2.3.3.3 RESERVED
- IS 2.3.3.4 RESERVED
- IS 2.3.3.5 RESERVED
- IS 2.3.3.6 RESERVED
- IS 2.3.3.7 RESERVED

#### IS 2.3.4 PRIVATE PILOT LICENSE

## IS 2.3.4.2 PPL SKILL TEST—AEROPLANE CATEGORY

(a) The skill test for the single-engine and multi-engine private pilot license –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) Licenses 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 task:
  - (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 task:
  - (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).

## IS 2.3.4.3 PPL SKILL TEST—HELICOPTER CATEGORY

- (a) The skill test for the private pilot license -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) Licenses 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.

## IS 2.3.4.4 RESERVED

- (a) Reserved.
- IS 2.3.4.5 RESERVED
- IS 2.3.4.6 RESERVED
- IS 2.3.4.7 RESERVED

## IS 2.3.5.2 CPL SKILL TEST—AEROPLANE CATEGORY

(a) The skill test for the single-engine and multi-engine commercial pilot license - 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) Licenses 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 task:
  - (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).

## IS 2.3.5.3 CPL SKILL TEST—HELICOPTER CATEGORY

- (a) The skill test for the commercial pilot license 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) Licenses 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.

## IS 2.3.5.4 RESERVED

(a) Reserved.

- IS 2.3.5.5 RESERVED
- IS 2.3.5.6 RESERVED
- IS 2.3.5.7 RESERVED

# IS 2.3.6.2 MULTI-CREW PILOT LICENSE SKILL TEST – AEROPLANE CATEGORY

- (a) The skill test for the multi-crew pilot license shall determine that the applicant, as pilot flying and pilot not flying, possesses the required skills in the following competency areas to perform as a co-pilot of turbine-powered aeroplanes certificated for operation with at least two pilots under VFR and IFR:
  - (1) Apply threat and error management principles;
  - (2) Perform aeroplane ground operations;
  - (3) Perform take-off;
  - (4) Perform climb;
  - (5) Perform cruise;
  - (6) Perform descent;
  - (7) Perform approach;
  - (8) Perform landing, and perform after-landing and aeroplane post-flight operations.

## IS 2.3.7.2 ATPL AND AIRCRAFT TYPE RATING SKILL TEST—AEROPLANE CATEGORY

- (a) The skill test for the airline transport pilot license 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;
  - (vii) Normal and abnormal procedures.;
  - (viii) Emergency procedures.
- (7) Post-flight procedures, including the applicant's knowledge and performance of the following tasks:
  - (i) After landing procedures;
  - (ii) Parking and securing.

## IS 2.3.7.3 ATPL AND AIRCRAFT TYPE RATING SKILL TEST—HELICOPTER CATEGORY

- (a) The skill test for the airline transport pilot license 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.
- (8) Emergency procedures, including the applicant's knowledge and performance.
- (9) Post-flight procedures, including the applicant's knowledge and performance of the following tasks:
  - (i) After landing procedures;
  - (ii) Parking and securing.

## IS 2.3.7.4 ATPL AND AIRCRAFT TYPE RATING SKILL TEST—POWERED-LIFT CATEGORY

(a) RESERVED.

## IS 2.3.8.2 IR SKILL TEST AND PROFICIENCY CHECK

(a) The skill test and proficiency check for the IR 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.

- (1) Preflight preparation, including the applicant's knowledge and performance of the following tasks:
  - (i) Weather information;
  - (ii) Cross-country flight planning.
- (2) 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.
- (3) 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.
- (4) 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.
- (5) Navigation systems, including the applicant's knowledge and performance of the following tasks:
  - (i) Intercepting and tracking navigational systems and DME Arcs;
  - (ii) Instrument approach procedures, including the applicant's knowledge and performance of the following tasks:
    - (A) Non-precision instrument approach.
    - (B) Precision ILS instrument approach.
    - (C) Missed approach.
    - (D) Circling approach.
    - (E) Landing from a straight-in or circling approach.
- (6) 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;
- (7) Post-flight procedures, including the applicant's knowledge and performance of the following tasks:
  - (i) Checking instruments and equipment.

## IS 2.3.9.2 FI SKILL TEST AND PROFICIENCY CHECK

(a) Aeroplane Category. The skill test and proficiency check for the FI 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:

Note 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.

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) 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) FI 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 license 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) Licenses 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) Glassy 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).
- (b) **Helicopter Category.** The skill test and proficiency check for the FI rating for 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) FI 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 license endorsements.
- (3) Preflight preparation including the applicant's knowledge and performance of the following tasks:
  - (i) Licenses 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 task:
  - (i) After-landing and securing.
- (c) **Powered-lift Category.** 
  - (1) RESERVED.
- (d) Airship Category. The skill test and proficiency check for the FI rating for 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) FI 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 weigh-off, ballast, and trim;
  - (vi) Night operations;
  - (vii) Regulations and publications;
  - (viii) National airspace system;
  - (ix) Logbook entries and license endorsement.
- (3) Preflight preparation, including the applicant's knowledge and performance of the following tasks:
  - (i) Licenses 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 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) 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) Masting;
  - (ii) Post-masting.
- (e) FI for Instrument Ratings (A, H, and PL). The skill test and proficiency for the FI for instrument ratings for 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 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 and paragraph are for single-engine and multi-engine.

Note 2: 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 behavior and effective communication;
- (iii) The teaching process;
- (iv) Teaching methods;
- (v) Critique and evaluation;
- (vi) FI 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.
- (f) FI for Additional Type Ratings. The skill test and proficiency checks for instructors for additional type ratings for aeroplane and helicopter shall include at least the following areas of operation:

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 Aeroplane and Helicopter.

- (1) Technical subject areas
  - (i) The content of the technical subject areas shall cover the areas as applicable to the aircraft class or type.
  - (ii) Flight simulator, including the applicant's knowledge and performance of the following tasks:
    - (A) Use of checklist, setting of radios/navigation aids;
    - (B) Starting engines;
    - (C) Takeoff checks;
    - (D) Instrument takeoff, transition to instruments after lift off;
    - (E) Engine failure during take-off between V1 and V2 (A);
    - (F) Aborted takeoff prior to reaching V1 (A);
    - (G) High mach buffeting, specific flight characteristics (if necessary) (A);
    - (H) Takeoff with engine failure prior to TDP or DPATO or shortly after TDP or DPATO (H);
    - (I) Steep turns;
    - (J) Recovery from approach to stall/takeoff, clean landing configuration (A);
    - Instrument approach to required minimum decision height or minimum descent height/altitude, manual one engine simulated inoperative during approach and landing or go-around (A);
    - (L) Instrument approach to required minimum decision height or minimum descent height/altitude, autopilot one engine simulated inoperative during approach and landing or go-around (H);
    - (M) Rejected landing and go-around;
    - (N) Crosswind landing.

- (iii) Category II and III operations, if applicable, including the applicant's knowledge and performance of the following tasks:
  - (A) Precision approaches, automatic with auto-throttle and flight director goaround caused by aircraft or ground equipment deficiencies;
  - (B) Go-around caused by weather conditions;
  - (C) Go-around at DH caused by offset position from centerline;
  - (D) One of the CAT II/CAT III approaches must lead to a landing.
- (iv) Aircraft, including the applicant's knowledge and performance of the following tasks:
  - (A) Familiarization with controls during outside checks;
  - (B) Use of checklist, setting of radios and navigation aids, starting engines.
  - (C) Taxiing;
  - (D) Takeoff;
  - (E) Engine failure during takeoff short after V2, after reaching climb out attitude (A);
  - (F) Engine failure during takeoff short after TDP or DPATO after reaching climb out attitude (H);
  - (G) Other emergency procedures (if necessary);
  - (H) Instrument approaches to required minimum decision height, manual one engine out during approach and landing or go-around;
  - (I) One engine simulated inoperative go-around from required minimum decision height;
  - (J) One engine (critical) simulated inoperative landing.

## IS 2.3.10.1 SKILL TEST FOR DESIGNATED PILOT EXAMINERS

- (a) The skill test for initial designation of a pilot examiner, issuance of additional designations, and renewal of examiner designations shall contain both the appropriate oral questioning and aircraft or FSTD performance in accordance with the applicable skill test for the aircraft category, and or class/type ratings as applicable.
- (b) Methods of skill testing. The Authority inspector will choose one of the following methods to test an examiner pilot applicant. The methods are listed in order of preference but scheduling difficulties may preclude use of the preferred method of testing.
  - (1) The Authority inspector evaluates the pilot examiner applicant testing an actual pilot applicant for a license or rating.
    - (i) The Authority will arrange for the pilot examiner applicant to conduct a skill test for an actual pilot applicant for a license or rating appropriate to the examiner designation sought, and the Authority inspector will observe the test from within the aircraft.
    - (ii) The Authority inspector will evaluate the pilot examiner applicant's performance while the pilot examiner applicant evaluates the pilot applicant.
    - (iii) Any discussion between the pilot examiner applicant and the Authority inspector concerning the pilot examiner applicant's performance with the pilot applicant will be held in private.
    - (iv) At the conclusion of the skill test for the actual pilot license or rating:

- (A) If the applicant has passed the skill test, the pilot examiner applicant will fill out the appropriate documentation for the pilot applicant while the Authority inspector observes. The Authority inspector will sign any documentation needed.
- (B) If the pilot applicant does not pass the skill test, the Authority inspector will complete and sign the appropriate document needed.
- (2) The Authority inspector playing the role of pilot applicant for a skill test.
  - (i) The Authority inspector will play the role of a pilot applicant for a skill test appropriate to the type of designation the pilot examiner applicant is seeking.
  - (ii) If the Authority inspector answers a question incorrectly to test whether the pilot examiner applicant Recognizes an incorrect answer, the incorrect response must be obviously wrong.
- (3) The Authority inspector gives a flight skill test to the pilot examiner applicant.
  - (i) The Authority inspector will test the pilot examiner applicant on selected manoeuvres in order to assess the pilot examiner applicant's flight proficiency and ability to evaluate a pilot applicant in accordance with the appropriate skill test.
  - (ii) The Authority inspector will evaluate the pilot examiner applicant's plan of action for completeness and efficiency.

# IS 2.6.1.4 APPLICATION FORM AIRCRAFT MAINTENANCE TECHNICIAN



Sint Maarten Civil Aviation Authority Ministry of Tourism, Economic Affairs, Traffic and Telecommunication



## AIRCRAFT MAINTENANCE TECHNICIAN LICENSE APPLICATION FORM FOR VALIDATION / CONVERSION / RENEWAL OR AMENDMENT APPLICANTS' DETAILS

Last Name First Name				
Date of Birth	Place of Birth			
Address				
Nationality				
LICENSE CATEGORIES AND SUBCATEGORIES				
Aircraft Type	Helicopter			
License No Date of Issue				
State of Issuance Expiration Date				
RATING         Airframe & Powerplant         Avionics				
Aircraft Type Ratings				
APPLICANTS EXPERIEN	CE(S) ON SPECIFIC AIRCRA	FT TYPE		
Aircraft Type	C Time Frame	Function		
EMPLOYERS' DETAILS				
Name				
Address				
SMCAA AMO APPROVAL REFERENCE				
Certificate No				
Telephone No	Email			

SMCAA – AF -07 AMT Application Form Revision 1. Dated- 30 September 2024. 1



## Sint Maarten Civil Aviation Authority

Ministry of Tourism, Economic Affairs, Traffic and Telecommunication



RATING	Δ	B1	B2	B3	C			
Aaranlana Turkina			02	55	C			
Aeroplane Turbine			-					
Aeroplane Piston			-					
Helicopter Turbine								
Helicopter Piston								
Avionics								
Piston engine non-pressurized aeroplane	of MTOM	2000 kg and b	elow.					
Privileges apply to the aircraft in its enti	rety.							
CERTIFICATION PROCESS	772				1			
I wish to apply for a Validation AMT:	Conversion	AMT: 🗆 Ren	ewal AMT	: 🗆 Amendm	ent AMT: 🛛			
This Application will not be process unles	s filled out	and accompa	nied by:					
1. 🗌 Operator Letter for first issue v	alidation re	equest. (For fir	st issuance	e only)				
2. 🛛 Copy of curriculum (Resume) sł	nowing trai	ning and expe	rience. (Fo	or first issuance	e only)			
3. 🗆 Copy of License.								
4. 🗌 Copy of Passport								
5. 🛛 Copy of certificates of type trai	ning on the	e aircraft type	for which	is applicant ha	s requested.			
(Not older than 2 years)								
6. Copy of last two years on the job training signed by employer								
6. Copy of last two years on the jo	0		APPLICANT DECLARATION					
6. Copy of last two years on the jo	PPLICANT	DECLARATION						
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<ol> <li>Copy of last two years on the jong of last two years on the jong of last two years on the jong of last two years on the last of l</li></ol>	PPLICANT I provided b and agree ion /Renew	DECLARATION by me on this a that they can ral or Amendr	applicatior be conside nent of my	form are com red as part of license. Date	plete and true the			

	SINCAA ONLI						
Received	Signature	Date					
Reviewed by							
SMCAA Reference No. assigned	Issued by SMCAA Director	Date					

SMCAA – AF -07 AMT Application Form Revision 1. Dated- 30 September 2024. 2

## IS 2.6.1.7 BASIC KNOWLEDGE REQUIREMENTS

1. Knowledge levels for Category A, B1, B2, B3 and C Aircraft Maintenance License

Basic knowledge for categories A, B1, B2 and B3 are indicated by knowledge levels

(1, 2 or 3) against each applicable subject. Category C applicants shall meet either the category B1 or the category B2 basic knowledge levels.

The knowledge level indicators are defined on 3 levels as follows:

a) **LEVEL 1**: A familiarization with the principal elements of the subject.

Objectives:

- (1) The applicant should be familiar with the basic elements of the subject.
- (2) The applicant should be able to give a simple description of the whole subject, using common words and examples.
- (3) The applicant should be able to use typical terms.
- b) **LEVEL 2**: A general knowledge of the theoretical and practical aspects of the subject and an ability to apply that knowledge.

Objectives:

- (1) The applicant should be able to understand the theoretical fundamentals of the subject.
- (2) The applicant should be able to give a general description of the subject using, as appropriate, typical examples.
- (3) The applicant should be able to use mathematical formulae in conjunction with physical laws describing the subject.
- (4) The applicant should be able to read and understand sketches, drawings and schematics describing the subject.
- (5) The applicant should be able to apply his knowledge in a practical manner using detailed procedures.
- c) LEVEL 3: A detailed knowledge of the theoretical and practical aspects of the subject and a capacity to combine and apply the separate elements of knowledge in a logical and comprehensive manner.

Objectives:

- (1) The applicant should know the theory of the subject and interrelationships with other subjects.
- (2) The applicant should be able to give a detailed description of the subject using theoretical fundamentals and specific examples.
- (3) The applicant should understand and be able to use mathematical formulae related to the subject.
- (4) The applicant should be able to read, understand and prepare sketches, simple drawings and schematics describing the subject.
- (5) The applicant should be able to apply his knowledge in a practical manner using manufacturer's instructions.

(6) The applicant should be able to interpret results from various sources and measurements and apply corrective action where appropriate.

## 2. Modularization

Qualification on basic subjects for each aircraft maintenance license category or subcategory should be in accordance with the following matrix, where applicable subjects are indicated by an 'X':

	A or B1 aer	oplane with:	A or B1 hel	icopter with:	B2	В3
Subject module	Turbine engine(s)	Piston engine(s)	Turbine engine(s)	Piston engine(s)	Avionics	Piston-engine non- pressurized aeroplanes 2 000 kg MTOM
1	Х	Х	Х	Х	Х	Х
2	Х	Х	X	X	Х	Х
3	X	Х	Х	Х	Х	Х
4	Х	Х	Х	Х	Х	Х
5	Х	Х	Х	Х	Х	Х
6	Х	Х	Х	Х	Х	Х
7A	Х	Х	Х	Х	Х	
7B						Х
8	Х	Х	Х	Х	Х	Х
9A	Х	Х	Х	Х	Х	
9B						Х
10	Х	Х	Х	Х	Х	Х
11A	Х					
11B		Х				
11C						Х
12			Х	Х		
13					Х	
14					Х	
15	Х		Х			
16		Х		X		X
17A	Х	Х				
17B						X

		LEV	/EL	
	А	B1	B2	В3
1.1 Arithmetic	1	2	2	2
Arithmetical terms and signs, methods of multipli- cation and division, fractions and decimals, factors and multiples, weights, measures and conversion factors, ratio and proportion, averages and percentages, areas and volumes, squares, cubes, square and cube roots.				
1.2 Algebra				
<ul> <li>(a) Evaluating simple algebraic expressions, addition, subtraction, multiplication and division, use of brackets, simple algebraic fractions;</li> </ul>	1	2	2	2
(b) Linear equations and their solutions;	_	1	1	1
Indices and powers, negative and fractional indices;				
Binary and other applicable numbering systems;				
Simultaneous equations and second degree equations with one unknown;				
Logarithms.				
1.3 Geometry				
(a) Simple geometrical constructions;	—	1	1	1
(b) Graphical representation; nature and uses of graphs, graphs of equations/functions;	2	2	2	2
(c) Simple trigonometry; trigonometrical rela- tionships, use of tables and rectangular and polar coordinates.		2	2	2

## MODULE 1. MATHEMATICS

## MODULE 2. PHYSICS

LEVEL			
 А	B1	B2	В3

2.1 Matter	1	1	1	1
Nature of matter: the chemical elements, structure of atoms, molecules;				
Chemical compounds;				
States: solid, liquid and gaseous;				
Changes between states.				
2.2 Mechanics				
2.2.1 Statics	1	2	1	1
Forces, moments and couples, representation as vectors;				

LEVEL A B1 B2 B3			
А	B1	B2	В3

			-	
Centre of gravity;				
Elements of theory of stress, strain and elasticity: tension, compression, shear and torsion;				
Nature and properties of solid, fluid and gas;				
Pressure and buoyancy in liquids (barometers).				
2.2.2 Kinetics	1	2	1	1
Linear movement: uniform motion in a straight line, motion under constant acceleration (motion under gravity);				
Rotational movement: uniform circular motion (centrifugal/centripetal forces);				
Periodic motion: pendular movement;				
Simple theory of vibration, harmonics and resonance;				
Velocity ratio, mechanical advantage and effi- ciency.				
2.2.3 Dynamics				
(a) Mass;				
Force, inertia, work, power, energy (potential, kinetic and total energy), heat, efficiency;	1	2	1	1
(b) Momentum, conservation of momentum;				
Impulse;	1	2	2	1
Gyroscopic principles;				
Friction: nature and effects, coefficient of friction (rolling resistance).				
2.2.4 Fluid dynamics				
(a) Specific gravity and density;	2	2	2	2
(b) Viscosity, fluid resistance, effects of stream- lining;	1	2	1	1
Effects of compressibility on fluids;				
Static, dynamic and total pressure: Bernoulli's Theorem, venturi.				
2.3 Thermodynamics				
<ul> <li>(a) Temperature: thermometers and temperature scales: Celsius, Fahrenheit and Kelvin; Heat definition;</li> </ul>	2	2	2	2
	•	•	•	

		LEV	/EL	
	А	B1	B2	B3
(b) Heat capacity, specific heat;	_	2	2	1
Heat transfer: convection, radiation and conduction;				
Volumetric expansion;				
First and second law of thermodynamics; Gases:				
ideal gases laws; specific heat at constant volume and constant pressure, work done by expanding gas;				
Isothermal, adiabatic expansion and compression, engine cycles, constant volume and constant pressure, refrigerators and heat pumps;				
Latent heats of fusion and evaporation, thermal energy, heat of combustion.				
2.4 Optics (Light)	—	2	2	
Nature of light; speed of light;				
Laws of reflection and refraction: reflection at plane surfaces, reflection by spherical mirrors, refraction, lenses;				
Fiber optics.				
2.5 Wave Motion and Sound		2	2	
Wave motion: mechanical waves, sinusoidal wave motion, interference phenomena, standing waves;				
Sound: speed of sound, production of sound, intensity, pitch and quality, Doppler effect.				

#### MODULE 3. ELECTRICAL FUNDAMENTALS

		LEV	/EL	
	А	B1	B2	В3
3.1 Electron Theory	1	1	1	1
Structure and distribution of electrical charges within: atoms, molecules, ions, compounds;				
Molecular structure of conductors, semiconductors and insulators.				
3.2 Static Electricity and Conduction	1	2	2	1
Static electricity and distribution of electrostatic charges;				
Electrostatic laws of attraction and repulsion;				
Units of charge, Coulomb's Law;				
Conduction of electricity in solids, liquids, gases and a vacuum.				

	LEVEL			
	А	B1	B2	В3
3.3 Electrical Terminology	1	2	2	1
The following terms, their units and factors affecting them: potential difference, electromotive force, voltage, current, resistance, conductance, charge, conventional current flow, electron flow.				
3.4 Generation of Electricity	1	1	1	1
Production of electricity by the following methods: light, heat, friction, pressure, chemical action, magnetism and motion.				
3.5 DC Sources of Electricity	1	2	2	2
Construction and basic chemical action of: primary cells, secondary cells, lead acid cells, nickel cadmium cells, other alkaline cells;				
Cells connected in series and parallel;				
Internal resistance and its effect on a battery;				
Construction, materials and operation of thermo- couples;				
Operation of photo-cells.				
3.6 DC Circuits	_	2	2	1
Ohms Law, Kirchoff's Voltage and Current Laws; Calculations using the above laws to find resistance, voltage and current;				
Significance of the internal resistance of a supply.				
3.7 Resistance/Resistor				
(a) Resistance and affecting factors;				
Specific resistance;				
Resistor color code, values and tolerances, preferred values, wattage ratings;	_	2	2	1
Resistors in series and parallel;				
Calculation of total resistance using series, parallel and series parallel combinations;				
Operation and use of potentiometers and rheostats;				
Operation of Wheatstone Bridge;				

	I	LEVEL		
	А	B1	B2	B3
(b) Positive and negative temperature coefficient conductance;		1	1	
Fixed resistors, stability, tolerance and limi- tations, methods of construction;				
Variable resistors, thermistors, voltage dependent resistors;				
Construction of potentiometers and rheostats;				
Construction of Wheatstone Bridge.				
3.8 Power	_	2	2	1
Power, work and energy (kinetic and potential);				
Dissipation of power by a resistor;				
Power formula;				
Calculations involving power, work and energy.				
3.9 Capacitance/Capacitor	_	2	2	1
Operation and function of a capacitor;				
Factors affecting capacitance area of plates, distance between plates, number of plates, dielectric and dielectric constant, working voltage, voltage rating;				
Capacitor types, construction and function;				
Capacitor color coding;				
Calculations of capacitance and voltage in series and parallel circuits;				
Exponential charge and discharge of a capacitor, time constants;				
Testing of capacitors.				
3.10 Magnetism				
(a) Theory of magnetism;		2	2	1
Properties of a magnet;		2	2	1
Action of a magnet suspended in the Earth's magnetic field;				
Magnetisation and demagnetisation;				
Magnetic shielding;				
Various types of magnetic material;				
Electromagnets construction and principles of operation;				
Hand clasp rules to determine: magnetic field around current carrying conductor;				
(b) Magnetomotive force, field strength, magnetic flux density, permeability, hysteresis loop, retentivity, coercive force reluctance, saturation point, eddy currents;		2	2	1
Precautions for care and storage of magnets.				

		LE	VEL	
	А	B1	В2	B3
3.11 Inductance/Inductor	—	2	2	1
Faraday's Law;				
Action of inducing a voltage in a conductor moving in a magnetic field;				
Induction principles;				
Effects of the following on the magnitude of an induced voltage: magnetic field strength, rate of change of flux, number of conductor turns;				
Mutual induction;				
The effect the rate of change of primary current and mutual inductance has on induced voltage;				
Factors affecting mutual inductance: number of turns in coil, physical size of coil, permeability of coil, position of coils with respect to each other;				
Lenz's Law and polarity determining rules;				
Back emf, self induction;				
Saturation point;				
Principle uses of inductors.				
3.12 DC Motor/Generator Theory	_	2	2	1
Basic motor and generator theory;				
Construction and purpose of components in DC generator;				
Operation of, and factors affecting output and direction of current flow in DC generators;				
Operation of, and factors affecting output power, torque, speed and direction of rotation of DC motors;				
Series wound, shunt wound and compound motors;				
Starter Generator construction.				
3.13 AC Theory	1	2	2	1
Sinusoidal waveform: phase, period, frequency, cycle;				
Instantaneous, average, root mean square, peak, peak to peak current values and calculations of these values, in relation to voltage, current and power;				
Triangular/Square waves;				
Single/3 phase principles.				

	LEVEL				
	А	B1	B2	В3	
3.14 Resistive (R), Capacitive (C) and Inductive (L) Circuits	_	2	2	1	
Phase relationship of voltage and current in L, C and R circuits, parallel, series and series parallel;					
Power dissipation in L, C and R circuits;					
Impedance, phase angle, power factor and current calculations;					
True power, apparent power and reactive power calculations.					
3.15 Transformers	_	2	2	1	
Transformer construction principles and operation;					
Transformer losses and methods for overcoming them;					
Transformer action under load and no-load conditions;					
Power transfer, efficiency, polarity markings;					
Calculation of line and phase voltages and currents;					
Calculation of power in a three phase system;					
Primary and Secondary current, voltage, turns ratio, power, efficiency;					
Auto transformers.					
3.16 Filters	_	1	1	_	
Operation, application and uses of the following filters: low pass, high pass, band pass, band stop.					
3.17 AC Generators	—	2	2	1	
Rotation of loop in a magnetic field and waveform produced;					
Operation and construction of revolving armature and revolving field type AC generators;					
Single phase, two phase and three phase alternators;					
Three phase star and delta connections advantages and uses;					
Permanent Magnet Generators.					

	LEVEL				
	А	B1	B2	B3	
3.18 AC Motors	_	2	2	1	
Construction, principles of operation and char- acteristics of: AC synchronous and induction motors both single and polyphase;					
Methods of speed control and direction of rotation;					
Methods of producing a rotating field: capacitor, inductor, shaded or split pole.					

		LEV	/EL	
	А	B1	B2	В3
4.1 Semiconductors				
4.1.1 Diodes				
(a) Diode symbols;	_	2	2	1
Diode characteristics and properties;				
Diodes in series and parallel;				
Main characteristics and use of silicor controlled rectifiers (thyristors), light emitting diode, photo conductive diode, varistor rectifier diodes;	n 5 ,			
Functional testing of diodes.				
<ul><li>(b) Materials, electron configuration, electrical properties;</li></ul>	_	_	2	
P and N type materials: effects of impurities or conduction, majority and minority characters;	1			
PN junction in a semiconductor, developmen of a potential across a PN junction in unbiased forward biased and reverse biased conditions;	t ,			
Diode parameters: peak inverse voltage maximum forward current, temperature frequency, leakage current, power dissipation;	,			
Operation and function of diodes in the following circuits: clippers, clampers, full and half wave rectifiers, bridge rectifiers, voltage doublers and triplers;	1			
Detailed operation and characteristics of the following devices: silicon controlled rectifier (thyristor), light emitting diode, Schottky diode photo conductive diode, varactor diode, varistor rectifier diodes, Zener diode.	e r ,			
4.1.2 Transistors				
(a) Transistor symbols;	_	1	2	1
Component description and orientation;				
Transistor characteristics and properties.				

MODULE 4. ELECTRONIC FUNDAMENTALS

	LEVEL			
	А	B1	B2	B3
<ul> <li>(b) Construction and operation of PNP and NPN transistors;</li> </ul>	_	_	2	_
Base, collector and emitter configurations;				
Testing of transistors;				
Basic appreciation of other transistor types and their uses;				
Application of transistors: classes of amplifier (A, B, C);				
Simple circuits including: bias, decoupling, feedback and stabilisation;				
Multistage circuit principles: cascades, push-pull, oscillators, multivibrators, flip-flop circuits.				
4.1.3 Integrated Circuits				
<ul> <li>(a) Description and operation of logic circuits and linear circuits/operational amplifiers;</li> </ul>	_	1	—	1
<ul><li>(b) Description and operation of logic circuits and linear circuits;</li></ul>	—	_	2	
Introduction to operation and function of ar operational amplifier used as: integrator, differ- entiator, voltage follower, comparator;				
Operation and amplifier stages connecting methods: resistive capacitive, inductive (trans- former), inductive resistive (IR), direct;				
Advantages and disadvantages of positive and negative feedback.				
4.2 Printed Circuit Boards	_	1	2	
Description and use of printed circuit boards.				
4.3 Servomechanisms				
<ul> <li>(a) Understanding of the following terms: Open and closed loop systems, feedback, follow up, analogue transducers;</li> </ul>	_	1	_	
Principles of operation and use of the following synchro system components/features: resolvers, differential, control and torque, transformers, inductance and capacitance transmitters;				
(b) Understanding of the following terms: Open and closed loop, follow up, servomechanism, analogue, transducer, null, damping, feedback, deadband;	_		2	
Construction operation and use of the following synchro system components: resolvers, differ- ential, control and torque, E and I transformers inductance transmitters, capacitance trans- mitters, synchronous transmitters;	, , ,			
Servomechanism defects, reversal of synchro leads, hunting.				

	LEVEL				
	А	B1-1	B1-1 B1-2		В3
		B1-3	B1-4		
5.1 Electronic Instrument Systems	1	2	2	3	1
Typical systems arrangements and cockpit layout of electronic instrument systems.					
5.2 Numbering Systems	_	1	_	2	_
Numbering systems: binary, octal and hexadecimal;					
Demonstration of conversions between the decimal and binary, octal and hexadecimal systems and vice versa.					
5.3 Data Conversion		1	_	2	_
Analogue Data, Digital Data;					
Operation and application of analogue to digital, and digital to analogue converters, inputs and outputs, limitations of various types.					
5.4 Data Buses	_	2	_	2	_
Operation of data buses in aircraft systems, including knowledge of ARINC and other specifi- cations.					
Aircraft Network/Ethernet.					
5.5 Logic Circuits					
<ul> <li>(a) Identification of common logic gate symbols, tables and equivalent circuits;</li> </ul>		2		2	1
Applications used for aircraft systems, schematic diagrams.					
(b) Interpretation of logic diagrams.	_	_	_	2	_
5.6 Basic Computer Structure					
<ul> <li>(a) Computer terminology (including bit, byte, software, hardware, CPU, IC, and various memory devices such as RAM, ROM, PROM);</li> </ul>	1	2	_	—	
Computer technology (as applied in aircraft systems).					

## MODULE 5. DIGITAL TECHNIQUES/ELECTRONIC INSTRUMENT SYSTEMS

	LEVEL				
	А	B1-1 B1-3	B1-2 B1-4	B2	В3
(b) Computer related terminology;	_	_	_	2	_
Operation, layout and interface of the major components in a micro computer including their associated bus systems;					
Information contained in single and multi- address instruction words;					
Memory associated terms;					
Operation of typical memory devices;					
Operation, advantages and disadvantages of the various data storage systems.					
5.7 Microprocessors	—	_	—	2	
Functions performed and overall operation of a microprocessor;					
Basic operation of each of the following micropro- cessor elements: control and processing unit, clock, register, arithmetic logic unit.					
5.8 Integrated Circuits	_	_	_	2	
Operation and use of encoders and decoders;					
Function of encoder types;					
Uses of medium, large and very large scale inte- gration.					
5.9 Multiplexing	_	—	—	2	—
Operation, application and identification in logic diagrams of multiplexers and demultiplexers.					
5.10 Fibre Optics	_	1	1	2	
Advantages and disadvantages of fibre optic data transmission over electrical wire propagation;					
Fibre optic data bus;					
Fibre optic related terms;					
Terminations;					
Couplers, control terminals, remote terminals;					
Application of fibre optics in aircraft systems.					
5.11 <b>Electronic Displays</b> Principles of operation of common types of displays used in modern aircraft, including Cathode Ray Tubes, Light Emitting Diodes and Liquid Crystal Display.		2	1	2	1

	LEVEL				
	А	B1-1 B1-3	B1-2 B1-4	B2	B3
5.12 Electrostatic Sensitive Devices	1	2	2	2	1
Special handling of components sensitive to elec- trostatic discharges;					
Awareness of risks and possible damage, component and personnel anti-static protection devices.					
5.13 Software Management Control	_	2	1	2	1
Awareness of restrictions, airworthiness requirements and possible catastrophic effects of unapproved changes to software programmes.					
5.14 Electromagnetic Environment	_	2	2	2	1
Influence of the following phenomena on main- tenance practices for electronic system:					
EMC-Electromagnetic Compatibility					
EMI-Electromagnetic Interference					
HIRF-High Intensity Radiated Field					
Lightning/lightning protection.					
5.15 Typical Electronic/Digital Aircraft Systems		2	2	2	1
General arrangement of typical electronic/digital aircraft systems and associated BITE (Built In Test Equipment) such as:					
(a) For B1 and B2 only:					
ACARS-ARINC Communication and Addressing and Reporting System					
EICAS-Engine Indication and Crew Alerting System					
FBW-Fly-by-Wire					
FMS-Flight Management System					
IRS-Inertial Reference System;					
(b) For B1, B2 and B3:					
ECAM-Electronic Centralised Aircraft Moni- toring					
EFIS-Electronic Flight Instrument System					
GPS-Global Positioning System					
TCAS-Traffic Alert Collision Avoidance System					
Integrated Modular Avionics					
Cabin Systems					
Information Systems.					

	LEVEL				
	А	B1	B2	В3	
6.1 Aircraft Materials — Ferrous					
<ul> <li>(a) Characteristics, properties and identification of common alloy steels used in aircraft;</li> </ul>	1	2	1	2	
Heat treatment and application of alloy steels.					
(b) Testing of ferrous materials for hardness, tensile strength, fatigue strength and impact resistance.	_	1	1	1	
6.2 Aircraft Materials — Non-Ferrous					
<ul> <li>(a) Characteristics, properties and identification of common non-ferrous materials used in aircraft;</li> </ul>	1	2	1	2	
Heat treatment and application of non-ferrous materials;					
(b) Testing of non-ferrous material for hardness, tensile strength, fatigue strength and impact resistance.	_	1	1	1	
6.3 Aircraft Materials — Composite and Non-Metallic					
6.3.1 Composite and non-metallic other than wood and fabric					
<ul> <li>(a) Characteristics, properties and identification of common composite and non-metallic materials, other than wood, used in aircraft;</li> </ul>	1	2	2	2	
Sealant and bonding agents;					
(b) The detection of defects/deterioration in composite and non-metallic material;	1	2	_	2	
Repair of composite and non-metallic material.					
6.3.2 Wooden structures	1	2	—	2	
Construction methods of wooden airframe structures;					
Characteristics, properties and types of wood and glue used in aeroplanes;					
Preservation and maintenance of wooden structure;					
Types of defects in wood material and wooden structures;					
The detection of defects in wooden structure;					
Repair of wooden structure.					

## MODULE 6. MATERIALS AND HARDWARE

	LEVEL				
	А	B1	B2	В3	
6.3.3 Fabric covering	1	2	_	2	
Characteristics, properties and types of fabrics used in aeroplanes;					
Inspections methods for fabric;					
Types of defects in fabric;					
Repair of fabric covering.					
6.4 Corrosion					
(a) Chemical fundamentals;	1	1	1	1	
Formation by, galvanic action process, microbi- ological, stress;					
(b) Types of corrosion and their identification;	2	3	2	2	
Causes of corrosion;					
Material types, susceptibility to corrosion.					
6.5 Fasteners					
6.5.1 Screw threads	2	2	2	2	
Screw nomenclature;					
Thread forms, dimensions and tolerances for standard threads used in aircraft;					
Measuring screw threads.					
6.5.2 Bolts, studs and screws	2	2	2	2	
Bolt types: specification, identification and marking of aircraft bolts, international standards;					
Nuts: self locking, anchor, standard types;					
Machine screws: aircraft specifications;					
Studs: types and uses, insertion and removal;					
Self tapping screws, dowels.					
6.5.3 Locking devices	2	2	2	2	
Tab and spring washers, locking plates, split pins, pal-nuts, wire locking, quick release fasteners, keys, circlips, cotter pins.					
6.5.4 Aircraft rivets	1	2	1	2	
Types of solid and blind rivets: specifications and identification, heat treatment.					

	LEVEL				
	А	B1	B2	В3	
6.6 Pipes and Unions					
<ul><li>(a) Identification of, and types of rigid and flexible pipes and their connectors used in aircraft;</li></ul>	2	2	2	2	
(b) Standard unions for aircraft hydraulic, fuel, oil, pneumatic and air system pipes.	2	2	1	2	
6.7 Springs	_	2	1	1	
Types of springs, materials, characteristics and applications.					
6.8 Bearings	1	2	2	1	
Purpose of bearings, loads, material, construction;					
Types of bearings and their application.					
6.9 Transmissions	1	2	2	1	
Gear types and their application;					
Gear ratios, reduction and multiplication gear systems, driven and driving gears, idler gears, mesh patterns;					
Belts and pulleys, chains and sprockets.					
6.10 Control Cables	1	2	1	2	
Types of cables;					
End fittings, turnbuckles and compensation devices;					
Pulleys and cable system components;					
Bowden cables;					
Aircraft flexible control systems.					
6.11 Electrical Cables and Connectors	1	2	2	2	
Cable types, construction and characteristics;					
High tension and co-axial cables;					
Crimping;					
Connector types, pins, plugs, sockets, insulators, current and voltage rating, coupling, identification codes.					

## MODULE 7A. MAINTENANCE PRACTICES

*Note:* This module does not apply to category B3. Relevant subject matters for category B3 are defined in module 7B.

		LEVEL	
	А	B1	B2
7.1 Safety Precautions-Aircraft and Workshop	3	3	3
Aspects of safe working practices including precautions to take when working with electricity, gases especially oxygen, oils and chemicals.			
Also, instruction in the remedial action to be taken in the event of a fire or another accident with one or more of these hazards including knowledge on extinguishing agents.			
7.2 Workshop Practices	3	3	3
Care of tools, control of tools, use of workshop materials;			
Dimensions, allowances and tolerances, standards of workmanship;			
Calibration of tools and equipment, calibration standards.			
7.3 Tools	3	3	3
Common hand tool types;			
Common power tool types;			
Operation and use of precision measuring tools;			
Lubrication equipment and methods.			
Operation, function and use of electrical general test equipment.			
7.4 Avionic General Test Equipment	_	2	3
Operation, function and use of avionic general test equipment.			
7.5 Engineering Drawings, Diagrams and Standards	1	2	2
Drawing types and diagrams, their symbols, dimensions, tolerances and projections;			
Identifying title block information;			
Microfilm, microfiche and computerised presen- tation;			
Specification 100 of the Air Transport Association (ATA) of America;			

		LEVEL	
	А	B1	B2
Aeronautical and other applicable standards including ISO, AN, MS, NAS and MIL;			
Wiring diagrams and schematic diagrams.			
7.6 Fits and Clearances	1	2	1
Drill sizes for bolt holes, classes of fits;			
Common system of fits and clearances;			
Schedule of fits and clearances for aircraft and engines;			
Limits for bow, twist and wear;			
Standard methods for checking shafts, bearings and other parts.			
7.7 Electrical Wiring Interconnection System (EWIS)	1	3	3
Continuity, insulation and bonding techniques and testing;			
Use of crimp tools: hand and hydraulic operated;			
Testing of crimp joints;			
Connector pin removal and insertion;			
Co-axial cables: testing and installation precautions;			
Identification of wire types, their inspection criteria and damage tolerance.			
Wiring protection techniques: Cable looming and loom support, cable clamps, protective sleeving techniques including heat shrink wrapping, shielding;			
EWIS installations, inspection, repair, maintenance and cleanliness standards.			
7.8 Riveting	1	2	
Riveted joints, rivet spacing and pitch;			
Tools used for riveting and dimpling;			
Inspection of riveted joints.			
7.9 Pipes and Hoses	1	2	_
Bending and belling/flaring aircraft pipes;			
Inspection and testing of aircraft pipes and hoses;			

	LEVEL		
	А	B1	B2
Installation and clamping of pipes.			
7.10 Springs	1	2	
Inspection and testing of springs.			
7.11 Bearings	1	2	
Testing, cleaning and inspection of bearings;			
Lubrication requirements of bearings;			
Defects in bearings and their causes.			
7.12 Transmissions	1	2	—
Inspection of gears, backlash;			
Inspection of belts and pulleys, chains and sprockets;			
Inspection of screw jacks, lever devices, push-pull rod systems.			
7.13 Control Cables	1	2	—
Swaging of end fittings;			
Inspection and testing of control cables;			
Bowden cables; aircraft flexible control systems.			
7.14 Material handling			
7.14.1 Sheet Metal	_	2	
Marking out and calculation of bend allowance;			
Sheet metal working, including bending and forming;			
Inspection of sheet metal work.			
7.14.2 Composite and non-metallic		2	—
Bonding practices;			
Environmental conditions;			
Inspection methods.			
7.15 Welding, Brazing, Soldering and Bonding			
(a) Soldering methods; inspection of soldered joints.	_	2	2

		LEVEL	
	А	B1	B2
<ul><li>(b) Welding and brazing methods;</li><li>Inspection of welded and brazed joints;</li><li>Bonding methods and inspection of bonded joints.</li></ul>	_	2	_
7.16 Aircraft Weight and Balance			
<ul> <li>(a) Centre of Gravity/Balance limits calculation: use of relevant documents;</li> </ul>	_	2	2
<ul><li>(b) Preparation of aircraft for weighing;</li><li>Aircraft weighing.</li></ul>	_	2	_
7.17 Aircraft Handling and Storage	2	2	2
Aircraft taxiing/towing and associated safety precautions;			
Aircraft jacking, chocking, securing and associated safety precautions;			
Aircraft storage methods;			
Refuelling/defuelling procedures;			
De-icing/anti-icing procedures;			
Electrical, hydraulic and pneumatic ground supplies.			
Effects of environmental conditions on aircraft handling and operation.			
7.18 Disassembly, Inspection, Repair and Assembly Techniques			
(a) Types of defects and visual inspection tech- niques;	2	3	3
Corrosion removal, assessment and repro- tection;			
(b) General repair methods, Structural Repair Manual;		2	_
Ageing, fatigue and corrosion control programmes;			
<ul> <li>(c) Non-destructive inspection techniques including, penetrant, radiographic, eddy current, ultrasonic and boroscope methods;</li> </ul>	_	2	1

	LEVEL		
	А	B1	B2
(d) Disassembly and re-assembly techniques;	2	2	2
(e) Trouble shooting techniques.	_	2	2
7.19 Abnormal Events			
(a) Inspections following lightning strikes and HIRF penetration;	2	2	2
(b) Inspections following abnormal events such as heavy landings and flight through turbulence.	2	2	_
7.20 Maintenance Procedures	1	2	2
Maintenance planning;			
Modification procedures;			
Stores procedures;			
Certification/release procedures;			
Interface with aircraft operation;			
Maintenance Inspection/Quality Control/Quality Assurance;			
Additional maintenance procedures;			
Control of life limited components.			

## MODULE 7B. MAINTENANCE PRACTICES

*Note:* The scope of this module shall reflect the technology of aeroplanes relevant to the B3 category.

	LEVEL
	B3
7.1 Safety Precautions-Aircraft and Workshop	3
Aspects of safe working practices including precautions to take when working with electricity, gases especially oxygen, oils and chemicals.	
Also, instruction in the remedial action to be taken in the event of a fire or another accident with one or more of these hazards including knowledge on extinguishing agents.	
7.2 Workshop Practices	3
Care of tools, control of tools, use of workshop materials;	
Dimensions, allowances and tolerances, standards of workmanship;	
Calibration of tools and equipment, calibration standards.	

	LEVEL
	B3
7.3 Tools	3
Common hand tool types;	
Common power tool types;	
Operation and use of precision measuring tools;	
Lubrication equipment and methods;	
Operation, function and use of electrical general test equipment.	
7.4 Avionic General Test Equipment	—
Operation, function and use of avionic general test equipment.	
7.5 Engineering Drawings, Diagrams and Standards	2
Drawing types and diagrams, their symbols, dimensions, tolerances and projections;	
Identifying title block information;	
Microfilm, microfiche and computerised presentations;	
Specification 100 of the Air Transport Association (ATA) of America;	
Aeronautical and other applicable standards including ISO, AN, MS, NAS and MIL;	
Wiring diagrams and schematic diagrams.	
7.6 Fits and Clearances	2
Drill sizes for bolt holes, classes of fits;	
Common system of fits and clearances;	
Schedule of fits and clearances for aircraft and engines;	
Limits for bow, twist and wear;	
Standard methods for checking shafts, bearings and other parts.	
7.7 Electrical Cables and Connectors	2
Continuity, insulation and bonding techniques and testing;	
Use of crimp tools: hand and hydraulic operated;	
Testing of crimp joints;	
Connector pin removal and insertion;	
Co-axial cables: testing and installation precautions;	
Wiring protection techniques: Cable looming and loom support, cable clamps, protective sleeving techniques including heat shrink wrapping, shielding.	

	LEVEL
	В3
7.8 Riveting	2
Riveted joints, rivet spacing and pitch;	
Tools used for riveting and dimpling;	
Inspection of riveted joints.	
7.9 Pipes and Hoses	2
Bending and belling/flaring aircraft pipes;	
Inspection and testing of aircraft pipes and hoses;	
Installation and clamping of pipes.	
7.10 Springs	1
Inspection and testing of springs.	
7.11 Bearings	2
Testing, cleaning and inspection of bearings;	
Lubrication requirements of bearings;	
Defects in bearings and their causes.	
7.12 Transmissions	2
Inspection of gears, backlash;	
Inspection of belts and pulleys, chains and sprockets;	
Inspection of screw jacks, lever devices, push-pull rod systems.	
7.13 Control Cables	2
Swaging of end fittings;	
Inspection and testing of control cables;	
Bowden cables; aircraft flexible control systems.	
7.14 Material handling	
7.14.1 Sheet Metal	2
Marking out and calculation of bend allowance;	
Sheet metal working, including bending and forming;	
Inspection of sheet metal work.	
7.14.2 Composite and non-metallic	2
Bonding practices;	
Environmental conditions;	
Inspection methods.	

	LEVEL
	В3
7.15 Welding, Brazing, Soldering and Bonding	
(a) Soldering methods; inspection of soldered joints;	2
(b) Welding and brazing methods;	2
Inspection of welded and brazed joints;	
Bonding methods and inspection of bonded joints.	
7.16 Aircraft Weight and Balance	
(a) Centre of Gravity/Balance limits calculation: use of relevant documents;	2
(b) Preparation of aircraft for weighing;	2
Aircraft weighing.	
7.17 Aircraft Handling and Storage	2
Aircraft taxiing/towing and associated safety precautions;	
Aircraft jacking, chocking, securing and associated safety precautions;	
Aircraft storage methods;	
Refuelling/defuelling procedures;	
De-icing/anti-icing procedures;	
Electrical, hydraulic and pneumatic ground supplies;	
Effects of environmental conditions on aircraft handling and operation.	
7.18 Disassembly, Inspection, Repair and Assembly Techniques	
(a) Types of defects and visual inspection techniques;	3
Corrosion removal, assessment and reprotection;	
(b) General repair methods, Structural Repair Manual;	2
Ageing, fatigue and corrosion control programmes;	
<ul> <li>(c) Non-destructive inspection techniques including, penetrant, radio- graphic, eddy current, ultrasonic and boroscope methods;</li> </ul>	2
(d) Disassembly and re-assembly techniques;	2
(e) Trouble shooting techniques.	2
7.19 Abnormal Events	
(a) Inspections following lightning strikes and HIRF penetration.	2
(b) Inspections following abnormal events such as heavy landings and flight through turbulence.	2

	LEVEL
	B3
7.20 Maintenance Procedures	2
Maintenance planning;	
Modification procedures;	
Stores procedures;	
Certification/release procedures;	
Interface with aircraft operation;	
Maintenance Inspection/Quality Control/Quality Assurance;	
Additional maintenance procedures;	
Control of life limited components.	

#### MODULE 8. BASIC AERODYNAMICS

	LEVEL			
	А	B1	B2	В3
8.1 Physics of the Atmosphere	1	2	2	1
International Standard Atmosphere (ISA), appli- cation to aerodynamics.				
8.2 Aerodynamics	1	2	2	1
Airflow around a body;				
Boundary layer, laminar and turbulent flow, free stream flow, relative airflow, upwash and downwash, vortices, stagnation;				
The terms: camber, chord, mean aerodynamic chord, profile (parasite) drag, induced drag, centre of pressure, angle of attack, wash in and wash out, fineness ratio, wing shape and aspect ratio;				
Thrust, Weight, Aerodynamic Resultant;				
Generation of Lift and Drag: Angle of Attack, Lift coefficient, Drag coefficient, polar curve, stall;				
Aerofoil contamination including ice, snow, frost.				
8.3 Theory of Flight	1	2	2	1
Relationship between lift, weight, thrust and drag;				
Glide ratio;				
Steady state flights, performance;				

	LEVEL			
	А	B1	B2	В3
Theory of the turn;				
Influence of load factor: stall, flight envelope and structural limitations;				
Lift augmentation.				
8.4 Flight Stability and Dynamics	1	2	2	1
Longitudinal, lateral and directional stability (active and passive).				

## MODULE 9A. HUMAN FACTORS

*Note:* This module does not apply to category B3. Relevant subject matters for category B3 are defined in module 9B.

	LEVEL		
	А	B1	B2
9.1 General	1	2	2
The need to take human factors into account;			
Incidents attributable to human factors/human error;			
'Murphy's' law.			
9.2 Human Performance and Limitations	1	2	2
Vision;			
Hearing;			
Information processing;			
Attention and perception;			
Memory;			
Claustrophobia and physical access.			
9.3 Social Psychology	1	1	1
Responsibility: individual and group;			
Motivation and de-motivation;			
Peer pressure;			
'Culture' issues;			
Team working;			
Management, supervision and leadership.			

	LEVEL		
	А	B1	B2
9.4 Factors Affecting Performance	2	2	2
Fitness/health;			
Stress: domestic and work related;			
Time pressure and deadlines;			
Workload: overload and underload;			
Sleep and fatigue, shiftwork;			
Alcohol, medication, drug abuse.			
9.5 Physical Environment	1	1	1
Noise and fumes;			
Illumination;			
Climate and temperature;			
Motion and vibration;			
Working environment.			
9.6 Tasks	1	1	1
Physical work;			
Repetitive tasks;			
Visual inspection;			
Complex systems.			
9.7 Communication	2	2	2
Within and between teams;			
Work logging and recording;			
Keeping up to date, currency;			
Dissemination of information.			
9.8 Human Error	1	2	2
Error models and theories;			
Types of error in maintenance tasks;			
Implications of errors (i.e. accidents);			
Avoiding and managing errors.			
9.9 Hazards in the Workplace	1	2	2
Recognizing and avoiding hazards;			
Dealing with emergencies.			

## MODULE 9B. HUMAN FACTORS

*Note:* The scope of this module shall reflect the less demanding environment of maintenance for B3 license holders.

	LEVEL
	В3
9.1 General	2
The need to take human factors into account;	
Incidents attributable to human factors/human error;	
'Murphy's' law.	
9.2 Human Performance and Limitations	2
Vision;	
Hearing;	
Information processing;	
Attention and perception;	
Memory;	
Claustrophobia and physical access.	
9.3 Social Psychology	1
Responsibility: individual and group;	
Motivation and de-motivation;	
Peer pressure;	
'Culture' issues;	
Team working;	
Management, supervision and leadership.	
9.4 Factors Affecting Performance	2
Fitness/health;	
Stress: domestic and work related;	
Time pressure and deadlines;	
Workload: overload and underload;	
Sleep and fatigue, shiftwork;	
Alcohol, medication, drug abuse.	
9.5 Physical Environment	1
Noise and fumes;	
Illumination;	
Climate and temperature;	
Motion and vibration;	

	LEVEL
	В3
Working environment.	
9.6 Tasks	1
Physical work;	
Repetitive tasks;	
Visual inspection;	
Complex systems.	
9.7 Communication	2
Within and between teams;	
Work logging and recording;	
Keeping up to date, currency;	
Dissemination of information.	
9.8 Human Error	2
Error models and theories;	
Types of error in maintenance tasks;	
Implications of errors (i.e. accidents);	
Avoiding and managing errors.	
9.9 Hazards in the Workplace	2
Recognizing and avoiding hazards;	
Dealing with emergencies.	

## MODULE 10. AVIATION LEGISLATION

	LEVEL			
	А	B1	B2	В3
10.1 Regulatory Framework	1	1	1	1
Role of the International Civil Aviation Organization;				
Role of the SMCAA;				
Relationship between the various Annexes (Parts) such as , Part-5, Part-6, Part-2, Part-3 and Part 9, Part 9				
, ,				
	LEVEL			
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	А	B1	B2	B3
10.2 Certifying Staff — Maintenance	2	2	2	2
Detailed understanding of Part-3				
10.3 Approved Maintenance Organizations	2	2	2	2
Detailed understanding of Part-6 and Part-5.				
10.4 Air operations	1	1	1	1
General understanding of PART 8				
& 9 Air Operators Certificates;				
Operator's responsibilities, in particular regarding continuing airworthiness and maintenance;				
Aircraft Maintenance Programme;				
MEL//CDL;				
Documents to be carried on board;				
Aircraft placarding (markings).				
10.5 Certification of aircraft, parts and appliances				
(a) General		1	1	1
General understanding of Part 5 and the SMCAA certification specifications .				
(b) Documents	—	2	2	2
Certificate of Airworthiness; restricted certificates of airworthiness and permit to fly;				
Certificate of Registration;				
Noise Certificate;				
Weight Schedule;				
Radio Station License and Approval.				
10.6 Continuing airworthiness	2	2	2	2
Detailed understanding of Part-5 provisions related to continuing airworthiness.				
Detailed understanding of Part-M				

	LEVEL			
	А	B1	B2	В3
10.7 Applicable National and International Requirements for				
<ul> <li>(a) Maintenance Programmes, Maintenance checks and inspections;</li> </ul>	1	2	2	2
Airworthiness Directives;				
Service Bulletins, manufacturers service information;				
Modifications and repairs;				
Maintenance documentation: maintenance manuals, structural repair manual, illustrated parts catalogue, etc.;				
Only for A to B2 licenses:				
Master Minimum Equipment Lists, Minimum Equipment List, Dispatch Deviation Lists;				
(b) Continuing airworthiness;				
Minimum equipment requirements — Test flights;		1	1	1
Only for B1 and B2 licenses:				
ETOPS, maintenance and dispatch requirements;				
All Weather Operations, Category 2/3 operations.				

# MODULE 11A. TURBINE AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS

	LEVEL	
	A1	B1.1
11.1 Theory of Flight		
11.1.1. Aeroplane Aerodynamics and Flight Controls	1	2
Operation and effect of:		
- roll control: ailerons and spoilers,		
<ul> <li>pitch control: elevators, stabilators, variable incidence stabilisers and canards,</li> </ul>		
— yaw control, rudder limiters;		
Control using elevons, ruddervators;		
High lift devices, slots, slats, flaps, flaperons;		
Drag inducing devices, spoilers, lift dumpers, speed brakes;		
Effects of wing fences, saw tooth leading edges;		
Boundary layer control using, vortex generators, stall wedges or leading edge devices;		

	LEVEL	
	A1	B1.1
Operation and effect of trim tabs, balance and antibalance (leading) tabs, servo tabs, spring tabs, mass balance, control surface bias, aerodynamic balance panels.		
11.1.2. High Speed Flight	1	2
Speed of sound, subsonic flight, transonic flight, supersonic flight;		
Mach number, critical Mach number, compressibility buffet, shock wave, aerodynamic heating, area rule;		
Factors affecting airflow in engine intakes of high speed aircraft;		
Effects of sweepback on critical Mach number.		
11.2 Airframe Structures — General Concepts		
(a) Airworthiness requirements for structural strength;	2	2
Structural classification, primary, secondary and tertiary;		
Fail safe, safe life, damage tolerance concepts;		
Zonal and station identification systems;		
Stress, strain, bending, compression, shear, torsion, tension, hoop stress, fatigue;		
Drains and ventilation provisions;		
System installation provisions;		
Lightning strike protection provision;		
Aircraft bonding.		
(b) Construction methods of: stressed skin fuselage, formers, stringers, longerons, bulkheads, frames, doublers, struts, ties, beams, floor structures, reinforcement, methods of skinning, anti-corrosive protection, wing, empennage and engine attachments;	1	2
Structure assembly techniques: riveting, bolting, bonding;		
Methods of surface protection, such as chromating, anodising, painting;		
Surface cleaning;		
Airframe symmetry: methods of alignment and symmetry checks.		
11.3 Airframe Structures — Aeroplanes		
11.3.1 Fuselage (ATA 52/53/56)	1	2
Construction and pressurization sealing;		
Wing, stabiliser, pylon and undercarriage attachments;		
Seat installation and cargo loading system;		
Doors and emergency exits: construction, mechanisms, operation and safety devices;		
Windows and windscreen construction and mechanisms.		

	LEVEL	
	A1	B1.1
11.3.2 Wings (ATA 57)	1	2
Construction;		
Fuel storage;		
Landing gear, pylon, control surface and high lift/drag attachments.		
11.3.3 Stabilisers (ATA 55)	1	2
Construction;		
Control surface attachment.		
11.3.4 Flight Control Surfaces (ATA 55/57)	1	2
Construction and attachment;		
Balancing — mass and aerodynamic.		
11.3.5 Nacelles/Pylons (ATA 54)	1	2
Nacelles/Pylons: — Construction, — Firewalls,		
— Engine mounts.		
11.4 Air Conditioning and Cabin Pressurization (ATA 21)		
11.4.1 Air supply	1	2
Sources of air supply including engine bleed, APU and ground cart.		
11.4.2 Air Conditioning	1	3
Air conditioning systems;		
Air cycle and vapour cycle machines;		
Distribution systems;		
Flow, temperature and humidity control system.		
11.4.3 Pressurization	1	3
Pressurization systems;		
Control and indication including control and safety valves;		
Cabin pressure controllers.		
11.4.4 Safety and warning devices	1	3
Protection and warning devices.		

	LEVEL	
	A1	B1.1
11.5 Instruments/Avionic Systems		
11.5.1 Instrument Systems (ATA 31)	1	2
Pitot static: altimeter, air speed indicator, vertical speed indicator;		
Gyroscopic: artificial horizon, attitude director, direction indicator, hori- zontal situation indicator, turn and slip indicator, turn coordinator;		
Compasses: direct reading, remote reading;		
Angle of attack indication, stall warning systems;		
Glass cockpit;		
Other aircraft system indication.		
11.5.2 Avionic Systems	1	1
<ul> <li>Fundamentals of system lay-outs and operation of:</li> <li>Auto Flight (ATA 22),</li> <li>Communications (ATA 23),</li> <li>Navigation Systems (ATA 34).</li> </ul>		
11.6 Electrical Power (ATA 24)	1	3
Batteries Installation and Operation;		
DC power generation;		
AC power generation;		
Emergency power generation;		
Voltage regulation;		
Power distribution;		
Inverters, transformers, rectifiers;		
Circuit protection;		
External/Ground power.		
11.7 Equipment and Furnishings (ATA 25)		
(a) Emergency equipment requirements;	2	2
Seats, harnesses and belts.		
<ul> <li>(b) Cabin lay-out;</li> <li>Equipment lay-out;</li> <li>Cabin Furnishing installation;</li> <li>Cabin entertainment equipment;</li> <li>Galley installation;</li> </ul>	1	1
Cargo nanoning and retention equipment;		

	LE	VEL
	A1	B1.1
11.8 Fire Protection (ATA 26)	1	3
<ul><li>(a) Fire and smoke detection and warning systems;</li><li>Fire extinguishing systems;</li><li>System tests;</li></ul>		
(b) Portable fire extinguisher.	1	1
11.9 Flight Controls (ATA 27)	1	3
Primary controls: aileron, elevator, rudder, spoiler;		
Trim control;		
Active load control;		
High lift devices;		
Lift dump, speed brakes;		
System operation: manual, hydraulic, pneumatic, electrical, fly-by-wire;		
Artificial feel, Yaw damper, Mach trim, rudder limiter, gust lock systems;		
Balancing and rigging;		
Stall protection/warning system.		
11.10 Fuel Systems (ATA 28)	1	3
System lay-out;		
Fuel tanks;		
Supply systems;		
Dumping, venting and draining;		
Cross-feed and transfer;		
Indications and warnings;		
Refuelling and defuelling;		
Longitudinal balance fuel systems.		
11.11 Hydraulic Power (ATA 29)	1	3
System lay-out;		
Hydraulic fluids;		
Hydraulic reservoirs and accumulators;		
Pressure generation: electric, mechanical, pneumatic;		
Emergency pressure generation;		
Filters;		
Pressure Control;		

	LEVEL	
	A1	B1.1
Power distribution;		
Indication and warning systems;		
Interface with other systems.		
11.12 Ice and Rain Protection (ATA 30)	1	3
Ice formation, classification and detection;		
Anti-icing systems: electrical, hot air and chemical;		
De-icing systems: electrical, hot air, pneumatic and chemical;		
Rain repellent;		
Probe and drain heating;		
Wiper systems.		
11.13 Landing Gear (ATA 32)	2	3
Construction, shock absorbing;		
Extension and retraction systems: normal and emergency;		
Indications and warning;		
Wheels, brakes, antiskid and autobraking;		
Tyres;		
Steering;		
Air-ground sensing.		
11.14 Lights (ATA 33)	2	3
External: navigation, anti collision, landing, taxiing, ice;		
Internal: cabin, cockpit, cargo;		
Emergency.		
11.15 Oxygen (ATA 35)	1	3
System lay-out: cockpit, cabin;		
Sources, storage, charging and distribution;		
Supply regulation;		
Indications and warnings.		
11.16 Pneumatic/Vacuum (ATA 36)	1	3
System lay-out;		
Sources: engine/APU, compressors, reservoirs, ground supply;		
Pressure control;		

	LEVEL	
	A1	B1.1
Distribution;		
Indications and warnings;		
Interfaces with other systems.		
11.17 Water/Waste (ATA 38)	2	3
Water system lay-out, supply, distribution, servicing and draining;		
Toilet system lay-out, flushing and servicing;		
Corrosion aspects.		
11.18 On Board Maintenance Systems (ATA 45)	1	2
Central maintenance computers;		
Data loading system;		
Electronic library system;		
Printing;		
Structure monitoring (damage tolerance monitoring).		
11.19 Integrated Modular Avionics (ATA42)	1	2
Functions that may be typically integrated in the Integrated Modular Avionic (IMA) modules are, among others:		
Bleed Management, Air Pressure Control, Air Ventilation and Control, Avionics and Cockpit Ventilation Control, Temperature Control, Air Traffic Communication, Avionics Communication Router, Electrical Load Management, Circuit Breaker Monitoring, Electrical System BITE, Fuel Management, Braking Control, Steering Control, Landing Gear Extension and Retraction, Tyre Pressure Indication, Oleo Pressure Indication, Brake Temperature Monitoring, etc.		
Core System; Network Components.		
11.20 Cabin Systems (ATA44)	1	2
The units and components which furnish a means of entertaining the passengers and providing communication within the aircraft (Cabin Inter- communication Data System) and between the aircraft cabin and ground stations (Cabin Network Service). Includes voice, data, music and video transmissions.		
The Cabin Intercommunication Data System provides an interface between cockpit/cabin crew and cabin systems. These systems support data exchange of the different related LRU's and they are typically operated via Flight Attendant Panels.		

	LEVEL	
	A1	B1.1
The Cabin Network Service typically consists on a server, typically inter- facing with, among others, the following systems: — Data/Radio Communication, In-Flight Entertainment System.		
<ul> <li>The Cabin Network Service may host functions such as:</li> <li>Access to pre-departure/departure reports,</li> <li>E-mail/intranet/Internet access,</li> <li>Passenger database;</li> </ul>		
Cabin Core System;		
In-flight Entertainment System;		
External Communication System;		
Cabin Mass Memory System;		
Cabin Monitoring System;		
Miscellaneous Cabin System.		
11.21 Information Systems (ATA46)	1	2
The units and components which furnish a means of storing, updating and retrieving digital information traditionally provided on paper, microfilm or microfiche. Includes units that are dedicated to the information storage and retrieval function such as the electronic library mass storage and controller. Does not include units or components installed for other uses and shared with other systems, such as flight deck printer or general use display.		
Typical examples include Air Traffic and Information Management Systems and Network Server Systems		
Aircraft General Information System;		
Flight Deck Information System;		
Maintenance Information System;		
Passenger Cabin Information System;		
Miscellaneous Information System.		

#### MODULE 11B. PISTON AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS

*Note 1:* This module does not apply to category B3. Relevant subject matters for category B3 are defined in module 11C.

*Note 2:* The scope of this Module shall reflect the technology of aeroplanes pertinent to the A2 and B1.2 subcategory.

	LEVEL	
	A2	B1.2
11.1 Theory of Flight		
11.1.1. Aeroplane Aerodynamics and Flight Controls	1	2
Operation and effect of:		
- roll control: ailerons and spoilers,		
<ul> <li>pitch control: elevators, stabilators, variable incidence stabilisers and canards,</li> </ul>		
— yaw control, rudder limiters;		

	LE	VEL
	A2	B1.2
Control using elevons, ruddervators;		
High lift devices, slots, slats, flaps, flaperons;		
Drag inducing devices, spoilers, lift dumpers, speed brakes;		
Effects of wing fences, saw tooth leading edges;		
Boundary layer control using, vortex generators, stall wedges or leading edge devices;		
Operation and effect of trim tabs, balance and antibalance (leading) tabs, servo tabs, spring tabs, mass balance, control surface bias, aerodynamic balance panels.		
11.1.2. High Speed Flight — N/A	_	
11.2 Airframe Structures — General Concepts		
(a) Airworthiness requirements for structural strength;	2	2
Structural classification, primary, secondary and tertiary;		
Fail safe, safe life, damage tolerance concepts;		
Zonal and station identification systems;		
Stress, strain, bending, compression, shear, torsion, tension, hoop stress, fatigue;		
Drains and ventilation provisions;		
System installation provisions;		
Lightning strike protection provision;		
Aircraft bonding.		
(b) Construction methods of: stressed skin fuselage, formers, stringers, longerons, bulkheads, frames, doublers, struts, ties, beams, floor structures, reinforcement, methods of skinning, anti-corrosive protection, wing, empennage and engine attachments;	1	2
Structure assembly techniques: riveting, bolting, bonding;		
Methods of surface protection, such as chromating, anodising, painting;		
Surface cleaning;		
Airframe symmetry: methods of alignment and symmetry checks.		
11.3 Airframe Structures — Aeroplanes		
11.3.1 Fuselage (ATA 52/53/56)	1	2
Construction and pressurization sealing;		
Wing, tail-plane, pylon and undercarriage attachments;		
Seat installation;		
Doors and emergency exits: construction and operation;		
Windows and windscreen attachment.		

	LEVEL	
	A2	B1.2
11.3.2 Wings (ATA 57)	1	2
Construction;		
Fuel storage;		
Landing gear, pylon, control surface and high lift/drag attachments.		
11.3.3 Stabilisers (ATA 55)	1	2
Construction;		
Control surface attachment.		
11.3.4 Flight Control Surfaces (ATA 55/57)	1	2
Construction and attachment;		
Balancing — mass and aerodynamic.		
11.3.5 Nacelles/Pylons (ATA 54)	1	2
Nacelles/Pylons: — Construction, — Firewalls, — Engine mounts.		
11.4 Air Conditioning and Cabin Pressurization (ATA 21)	1	3
Pressurization and air conditioning systems;		
Cabin pressure controllers, protection and warning devices;		
Heating systems.		
11.5 Instruments/Avionic Systems		
11.5.1 Instrument Systems (ATA 31)	1	2
Pitot static: altimeter, air speed indicator, vertical speed indicator;		
Gyroscopic: artificial horizon, attitude director, direction indicator, hori- zontal situation indicator, turn and slip indicator, turn coordinator;		
Compasses: direct reading, remote reading;		
Angle of attack indication, stall warning systems;		
Glass cockpit;		
Other aircraft system indication.		
11.5.2 Avionic Systems	1	1
<ul> <li>Fundamentals of system lay-outs and operation of:</li> <li>Auto Flight (ATA 22),</li> <li>Communications (ATA 23),</li> <li>Navigation Systems (ATA 34).</li> </ul>		

	LEVEL	
	A2	B1.2
11.6 Electrical Power (ATA 24)	1	3
Batteries Installation and Operation;		
DC power generation;		
Voltage regulation;		
Power distribution;		
Circuit protection;		
Inverters, transformers.		
11.7 Equipment and Furnishings (ATA 25)		
<ul><li>(a) Emergency equipment requirements;</li><li>Seats, harnesses and belts;</li></ul>	2	2
<ul> <li>(b) Cabin lay-out;</li> <li>Equipment lay-out;</li> <li>Cabin Furnishing installation;</li> <li>Cabin entertainment equipment;</li> <li>Galley installation;</li> <li>Cargo handling and retention equipment;</li> <li>Airstairs.</li> </ul>	1	1
11.8 Fire Protection (ATA 26)		
<ul><li>(a) Fire and smoke detection and warning systems;</li><li>Fire extinguishing systems;</li><li>System tests;</li></ul>	1	3
(b) Portable fire extinguisher.	1	3
11.9 Flight Controls (ATA 27)	1	3
Primary controls: aileron, elevator, rudder;		
Trim tabs;		
High lift devices;		
System operation: manual;		
Gust locks;		
Balancing and rigging;		
Stall warning system.		
11.10 Fuel Systems (ATA 28)	1	3
System lay-out;		
Fuel tanks;		
Supply systems;		
Cross-feed and transfer;		
Indications and warnings;		

	LEVEL	
	A2	B1.2
Refuelling and defuelling.		
11.11 Hydraulic Power (ATA 29)	1	3
System lay-out;		
Hydraulic fluids;		
Hydraulic reservoirs and accumulators;		
Pressure generation: electric, mechanical;		
Filters;		
Pressure Control;		
Power distribution;		
Indication and warning systems.		
11.12 Ice and Rain Protection (ATA 30)	1	3
Ice formation, classification and detection;		
De-icing systems: electrical, hot air, pneumatic and chemical;		
Probe and drain heating;		
Wiper systems.		
11.13 Landing Gear (ATA 32)	2	3
Construction, shock absorbing;		
Extension and retraction systems: normal and emergency;		
Indications and warning;		
Wheels, brakes, antiskid and autobraking;		
Tyres;		
Steering;		
Air-ground sensing.		
11.14 Lights (ATA 33)	2	3
External: navigation, anti collision, landing, taxiing, ice;		
Internal: cabin, cockpit, cargo;		
Emergency.		
11.15 Oxygen (ATA 35)	1	3
System lay-out: cockpit, cabin;		
Sources, storage, charging and distribution;		
Supply regulation;		
Indications and warnings.		

	LEVEL	
	A2	B1.2
11.16 Pneumatic/Vacuum (ATA 36)	1	3
System lay-out;		
Sources: engine/APU, compressors, reservoirs, ground supply;		
Pressure control;		
Distribution;		
Indications and warnings;		
Interfaces with other systems.		
11.17 Water/Waste (ATA 38)	2	3
Water system lay-out, supply, distribution, servicing and draining;		
Toilet system lay-out, flushing and servicing;		
Corrosion aspects.		

## MODULE 11C. PISTON AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS

 $\it Note:$  The scope of this module shall reflect the technology of aeroplanes pertinent to the B3 category.

	LEVEL
	В3
11.1 Theory of Flight	
Aeroplane Aerodynamics and Flight Controls	1
Operation and effect of:	
— roll control: ailerons,	
<ul> <li>pitch control: elevators, stabilators, variable incidence stabilisers and canards,</li> </ul>	
— yaw control, rudder limiters;	
Control using elevons, ruddervators;	
High lift devices, slots, slats, flaps, flaperons;	
Drag inducing devices, lift dumpers, speed brakes;	
Effects of wing fences, saw tooth leading edges;	
Boundary layer control using, vortex generators, stall wedges or leading edge devices;	
Operation and effect of trim tabs, balance and anti-balance (leading) tabs, servo tabs, spring tabs, mass balance, control surface bias, aerodynamic	

	LEVEL
	B3
11.2 Airframe Structures — General Concepts	
(a) Airworthiness requirements for structural strength;	2
Structural classification, primary, secondary and tertiary;	
Fail safe, safe life, damage tolerance concepts;	
Zonal and station identification systems;	
Stress, strain, bending, compression, shear, torsion, tension, hoop stress, fatigue;	
Drains and ventilation provisions;	
System installation provisions;	
Lightning strike protection provision;	
Aircraft bonding;	
(b) Construction methods of: stressed skin fuselage, formers, stringers, longerons, bulkheads, frames, doublers, struts, ties, beams, floor structures, reinforcement, methods of skinning, anti-corrosive protection, wing, empennage and engine attachments;	2
Structure assembly techniques: riveting, bolting, bonding;	
Methods of surface protection, such as chromating, anodising, painting;	
Surface cleaning;	
Airframe symmetry: methods of alignment and symmetry checks.	
11.3 Airframe Structures — Aeroplanes	
11.3.1 Fuselage (ATA 52/53/56)	1
Construction;	
Wing, tail-plane, pylon and undercarriage attachments;	
Seat installation;	
Doors and emergency exits: construction and operation;	
Window and windscreen attachment.	
11.3.2 Wings (ATA 57)	1
Construction;	
Fuel storage;	
Landing gear, pylon, control surface and high lift/drag attachments.	
11.3.3 Stabilisers (ATA 55)	1
Construction;	
Control surface attachment.	
11.3.4 Flight Control Surfaces (ATA 55/57)	1
Construction and attachment;	
Balancing — mass and aerodynamic.	

	LEVEL
	В3
11.3.5 Nacelles/Pylons (ATA 54)	
Nacelles/Pylons:	1
— Construction,	
— Firewalls,	
— Engine mounts.	
11.4 Air Conditioning (ATA 21)	
Heating and ventilation systems.	1
11.5 Instruments/Avionic Systems	
11.5.1 Instrument Systems (ATA 31)	1
Pitot static: altimeter, air speed indicator, vertical speed indicator;	
Gyroscopic: artificial horizon, attitude director, direction indicator, hori- zontal situation indicator, turn and slip indicator, turn coordinator;	
Compasses: direct reading, remote reading;	
Angle of attack indication, stall warning systems;	
Glass cockpit;	
Other aircraft system indication.	
11.5.2 Avionic Systems	1
Fundamentals of system lay-outs and operation of:	
— Auto Flight (ATA 22),	
- Communications (ATA 23),	
— Navigatori Systems (ATA 54).	
11.6 Electrical Power (ATA 24)	2
Batteries Installation and Operation;	
DC power generation;	
Voltage regulation;	
Power distribution;	
Circuit protection;	
Inverters, transformers.	
11.7 Equipment and Furnishings (ATA 25)	2
Emergency equipment requirements;	
Seats, harnesses and belts.	

	LEVEL
	В3
11.8 Fire Protection (ATA 26)	2
Portable fire extinguisher.	
11.9 Flight Controls (ATA 27)	3
Primary controls: aileron, elevator, rudder;	
Trim tabs;	
High lift devices;	
System operation: manual;	
Gust locks;	
Balancing and rigging;	
Stall warning system.	
11.10 Fuel Systems (ATA 28)	2
System lay-out;	
Fuel tanks;	
Supply systems;	
Cross-feed and transfer;	
Indications and warnings;	
Refuelling and defuelling.	
11.11 Hydraulic Power (ATA 29)	2
System lay-out;	
Hydraulic fluids;	
Hydraulic reservoirs and accumulators;	
Pressure generation: electric, mechanical;	
Filters;	
Pressure Control;	
Power distribution;	
Indication and warning systems.	
11.12 Ice and Rain Protection (ATA 30)	1
Ice formation, classification and detection;	
De-icing systems: electrical, hot air, pneumatic and chemical;	
Probe and drain heating;	
Wiper systems.	

	LEVEL
	B3
11.13 Landing Gear (ATA 32)	2
Construction, shock absorbing;	
Extension and retraction systems: normal and emergency;	
Indications and warning;	
Wheels, brakes, antiskid and autobraking;	
Tyres;	
Steering.	
11.14 Lights (ATA 33)	2
External: navigation, anti collision, landing, taxiing, ice;	
Internal: cabin, cockpit, cargo;	
Emergency.	
11.15 Oxygen (ATA 35)	2
System lay-out: cockpit, cabin;	
Sources, storage, charging and distribution;	
Supply regulation;	
Indications and warnings.	
11.16 Pneumatic/Vacuum (ATA 36)	2
System lay-out;	
Sources: engine/APU, compressors, reservoirs, ground supply;	
Pressure and vacuum pumps	
Pressure control;	
Distribution;	
Indications and warnings;	
Interfaces with other systems.	

#### MODULE 12. HELICOPTER AERODYNAMICS, STRUCTURES AND SYSTEMS

LEVEL	
A3	B1.3
A4	B1.4

	1	
12.1 Theory of Flight — Rotary Wing Aerodynamics	1	2
Terminology;		
Effects of gyroscopic precession;		
	LEVEL	
	A3	B1.3
	A4	B1.4

Torque reaction and directional control;		
Dissymmetry of lift, Blade tip stall;		
Translating tendency and its correction;		
Coriolis effect and compensation;		
Vortex ring state, power settling, overpitching;		
Auto-rotation;		
Ground effect.		
12.2 Flight Control Systems	2	3
Cyclic control;		
Collective control;		
Swashplate;		
Yaw control: Anti-Torque Control, Tail rotor, bleed air;		
Main Rotor Head: Design and Operation features;		
Blade Dampers: Function and construction;		
Rotor Blades: Main and tail rotor blade construction and attachment;		
Trim control, fixed and adjustable stabilisers;		
System operation: manual, hydraulic, electrical and fly-by-wire;		
Artificial feel;		
Balancing and rigging.		
12.3 Blade Tracking and Vibration Analysis	1	3
Rotor alignment;		
Main and tail rotor tracking;		
Static and dynamic balancing;		
Vibration types, vibration reduction methods;		
Ground resonance.		
12.4 Transmission	1	3
Gear boxes, main and tail rotors;		
Clutches, free wheel units and rotor brake;		
Tail rotor drive shafts, flexible couplings, bearings, vibration dampers and bearing hangers.		

	LEVEL	
	A3	B1.3
	A4	B1.4
12.5 Airframe Structures		
(a) Airworthiness requirements for structural strength;	2	2
Structural classification, primary, secondary and tertiary;		
Fail safe, safe life, damage tolerance concepts;		
Zonal and station identification systems;		
Stress, strain, bending, compression, shear, torsion, tension, hoop stress, fatigue;		
Drains and ventilation provisions;		
System installation provisions;		
Lightning strike protection provision;		
(b) Construction methods of: stressed skin fuselage, formers, stringers, longerons, bulkheads, frames, doublers, struts, ties, beams, floor structures, reinforcement, methods of skinning and anti-corrosive protection.	1	2
Pylon, stabiliser and undercarriage attachments;		
Seat installation;		
Doors: construction, mechanisms, operation and safety devices;		
Windows and windscreen construction;		
Fuel storage;		
Finewans;		
Structure assembly techniques: riveting bolting bonding:		
Methods of surface protection, such as chromating, anodising, painting.		
Surface cleaning.		
Airframe symmetry: methods of alignment and symmetry checks.		
12.6 Air Conditioning (ATA 21)		
12.6.1 Air supply	1	2
Sources of air supply including engine bleed and ground cart.		
12.6.2 Air conditioning	1	3
Air conditioning systems;		
Distribution systems;		
Flow and temperature control systems;		
Protection and warning devices.		
12.7 Instruments/Avionic Systems		
12.7.1 Instrument Systems (ATA 31)	1	2
Pitot static: altimeter, air speed indicator, vertical speed indicator;		
Gyroscopic: artificial horizon, attitude director, direction indicator, hori- zontal situation indicator, turn and slip indicator, turn coordinator;		

	L	LEVEL	
	A3 A4	B1.3 B1.4	
Compasses: direct reading, remote reading;			
Vibration indicating systems — HUMS;			
Glass cockpit;			
Other aircraft system indication.			
12.7.2 Avionic Systems	1	1	
Fundamentals of system layouts and operation of: Auto Flight (ATA 22); Communications (ATA 23); Navigation Systems (ATA 34).			
12.8 Electrical Power (ATA 24)	1	3	
Batteries Installation and Operation;			
DC power generation, AC power generation;			
Emergency power generation;			
Voltage regulation, Circuit protection.			
Power distribution;			
Inverters, transformers, rectifiers;			
External/Ground power.			
12.9 Equipment and Furnishings (ATA 25)			
<ul><li>(a) Emergency equipment requirements;</li><li>Seats, harnesses and belts;</li><li>Lifting systems;</li></ul>	2	2	
<ul><li>(b) Emergency flotation systems;</li><li>Cabin lay-out, cargo retention;</li><li>Equipment lay-out;</li><li>Cabin Furnishing Installation.</li></ul>	1	1	
12.10 Fire Protection (ATA 26)	1	3	
Fire and smoke detection and warning systems;			
Fire extinguishing systems;			
System tests.			
12.11 Fuel Systems (ATA 28)	1	3	
System lay-out;			
Fuel tanks;			
Supply systems;			
Dumping, venting and draining;			
Cross-feed and transfer;			

	LEVEL	
	A3	B1.3
	A4	B1.4
Indications and warnings;		
Refuelling and defuelling.		
12.12 Hydraulic Power (ATA 29)	1	3
System lay-out;		
Hydraulic fluids;		
Hydraulic reservoirs and accumulators;		
Pressure generation: electric, mechanical, pneumatic;		
Emergency pressure generation;		
Filters;		
Pressure Control;		
Power distribution;		
Indication and warning systems;		
Interface with other systems.		
12.13 Ice and Rain Protection (ATA 30)	1	3
Ice formation, classification and detection;		
Anti-icing and De-icing systems: electrical, hot air and chemical;		
Rain repellent and removal;		
Probe and drain heating;		
Wiper system.		
12.14 Landing Gear (ATA 32)	2	3
Construction, shock absorbing;		
Extension and retraction systems: normal and emergency;		
Indications and warning;		
Wheels, Tyres, brakes;		
Steering;		
Air-ground sensing;		
Skids, floats.		
12.15 Lights (ATA 33)	2	3
External: navigation, landing, taxiing, ice;		
Internal: cabin, cockpit, cargo;		
Emergency.		

	LEVEL	
	A3 A4	B1.3 B1.4
12.16 Pneumatic/Vacuum (ATA 36)	1	3
System lay-out;		
Sources: engine/APU, compressors, reservoirs, ground supply;		
Pressure control;		
Distribution;		
Indications and warnings;		
Interfaces with other systems.		
12.17 Integrated Modular Avionics (ATA42)	1	2
Functions that may be typically integrated in the Integrated Modular Avionic (IMA) modules are, among others:		
Bleed Management, Air Pressure Control, Air Ventilation and Control, Avionics and Cockpit Ventilation Control, Temperature Control, Air Traffic Communication, Avionics Communication Router, Electrical Load Management, Circuit Breaker Monitoring, Electrical System BITE, Fuel Management, Braking Control, Steering Control, Landing Gear Extension and Retraction, Tyre Pressure Indication, Oleo Pressure Indication, Brake Temperature Monitoring, etc.		
Core System;		
Network Components.		
12.18 On Board Maintenance Systems (ATA45)	1	2
Central maintenance computers;		
Data loading system;		
Electronic library system;		
Printing;		
Structure monitoring (damage tolerance monitoring).		
12.19 Information Systems (ATA46)	1	2
The units and components which furnish a means of storing, updating and retrieving digital information traditionally provided on paper, microfilm or microfiche. Includes units that are dedicated to the information storage and retrieval function such as the electronic library mass storage and controller. Does not include units or components installed for other uses and shared with other systems, such as flight deck printer or general use display.		
Typical examples include Air Traffic and Information Management Systems and Network Server Systems.		
Aircraft General Information System;		
Flight Deck Information System;		

	LEVEL	
	A3 A4	B1.3 B1.4
Maintenance Information System;		
Passenger Cabin Information System;		
Miscellaneous Information System.		

#### MODULE 13. AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS

	LEVEL
	B2
13.1 Theory of Flight	
(a) Aeroplane Aerodynamics and Flight Controls	1
Operation and effect of:	
- roll control: ailerons and spoilers,	
<ul> <li>pitch control: elevators, stabilators, variable incidence stabilisers and canards,</li> </ul>	
— yaw control, rudder limiters;	
Control using elevons, ruddervators;	
High lift devices: slots, slats, flaps;	
Drag inducing devices: spoilers, lift dumpers, speed brakes;	
Operation and effect of trim tabs, servo tabs, control surface bias;	
(b) High Speed Flight	1
Speed of sound, subsonic flight, transonic flight, supersonic flight;	
Mach number, critical Mach number;	
(c) Rotary Wing Aerodynamics	1
Terminology;	
Operation and effect of cyclic, collective and anti-torque controls.	
13.2 Structures — General Concepts	
(a) Fundamentals of structural systems;	1
(b) Zonal and station identification systems;	2
Electrical bonding;	
Lightning strike protection provision.	

	LEVEL
	B2
13.3 Autoflight (ATA 22)	3
Fundamentals of automatic flight control including working principles and current terminology;	
Command signal processing;	
Modes of operation: roll, pitch and yaw channels;	
Yaw dampers;	
Stability Augmentation System in helicopters;	
Automatic trim control;	
Autopilot navigation aids interface;	
Autothrottle systems;	
Automatic Landing Systems: principles and categories, modes of operation, approach, glideslope, land, go-around, system monitors and failure conditions.	
13.4 Communication/Navigation (ATA 23/34)	3
Fundamentals of radio wave propagation, antennas, transmission lines, communication, receiver and transmitter;	
Working principles of following systems:	
<ul> <li>Very High Frequency (VHF) communication,</li> </ul>	
— High Frequency (HF) communication,	
— Audio,	
<ul> <li>Emergency Locator Transmitters,</li> </ul>	
<ul> <li>Cockpit Voice Recorder,</li> </ul>	
<ul> <li>Very High Frequency omnidirectional range (VOR),</li> </ul>	
— Automatic Direction Finding (ADF),	
— Instrument Landing System (ILS),	
— Microwave Landing System (MLS),	
— Flight Director systems, Distance Measuring Equipment (DME),	
— Very Low Frequency and hyperbolic navigation (VLF/Omega),	
— Doppler navigation,	
— Area navigation, RNAV systems,	
— Flight Management Systems,	
<ul> <li>Global Positioning System (GPS), Global Navigation Satellite Systems (GNSS),</li> </ul>	
— Inertial Navigation System,	
— Air Traffic Control transponder, secondary surveillance radar,	
- Traffic Alert and Collision Avoidance System (TCAS),	
— Weather avoidance radar,	
— Radio altimeter,	
<ul> <li>ARINC communication and reporting.</li> </ul>	

	LEVEL
	B2
13.5 Electrical Power (ATA 24)	3
Batteries Installation and Operation;	
DC power generation;	
AC power generation;	
Emergency power generation;	
Voltage regulation;	
Power distribution;	
Inverters, transformers, rectifiers;	
Circuit protection;	
External/Ground power.	
13.6 Equipment and Furnishings (ATA 25)	3
Electronic emergency equipment requirements;	
Cabin entertainment equipment.	
13.7 Flight Controls (ATA 27)	
<ul> <li>(a) Primary controls: aileron, elevator, rudder, spoiler;</li> <li>Trim control;</li> <li>Active load control;</li> <li>High lift devices;</li> <li>Lift dump, speed brakes;</li> <li>System operation: manual, hydraulic, pneumatic;</li> <li>Artificial feel, Yaw damper, Mach trim, rudder limiter, gust locks.</li> <li>Stall protection systems;</li> </ul>	2
(b) System operation: electrical, fly-by-wire.	3
13.8 Instruments (ATA 31)	3
Classification;	
Atmosphere;	
Terminology;	
Pressure measuring devices and systems;	
Pitot static systems;	
Altimeters;	
Vertical speed indicators;	
Airspeed indicators;	
Machmeters;	
Altitude reporting/alerting systems;	

	LEVEL
	B2
Air data computers;	
Instrument pneumatic systems;	
Direct reading pressure and temperature gauges;	
Temperature indicating systems;	
Fuel quantity indicating systems;	
Gyroscopic principles;	
Artificial horizons;	
Slip indicators;	
Directional gyros;	
Ground Proximity Warning Systems;	
Compass systems;	
Flight Data Recording systems;	
Electronic Flight Instrument Systems;	
Instrument warning systems including master warning systems and centralised warning panels;	
Stall warning systems and angle of attack indicating systems;	
Vibration measurement and indication;	
Glass cockpit.	
13.9 Lights (ATA 33)	3
External: navigation, landing, taxiing, ice;	
Internal: cabin, cockpit, cargo;	
Emergency.	
13.10 On Board Maintenance Systems (ATA 45)	3
Central maintenance computers;	
Data loading system;	
Electronic library system;	
Printing;	
Structure monitoring damage tolerance monitoring).	
13.11 Air Conditioning and Cabin Pressurization (ATA21)	
13.11.1. Air supply	2
Sources of air supply including engine bleed, APU and ground cart;	

	LEVEL
	B2
13.11.2. Air Conditioning	
Air conditioning systems;	2
Air cycle and vapour cycle machines;	3
Distribution systems;	1
Flow, temperature and humidity control system.	3
13.11.3. Pressurization	3
Pressurization systems;	
Control and indication including control and safety valves;	
Cabin pressure controllers.	
13.11.4. Safety and warning devices	3
Protection and warning devices.	
13.12 Fire Protection (ATA 26)	
<ul><li>(a) Fire and smoke detection and warning systems;</li><li>Fire extinguishing systems;</li><li>System tests;</li></ul>	3
(b) Portable fire extinguisher.	1
13.13 Fuel Systems (ATA 28)	
System lay-out;	1
Fuel tanks;	1
Supply systems;	1
Dumping, venting and draining;	1
Cross-feed and transfer;	2
Indications and warnings;	3
Refuelling and defuelling;	2
Longitudinal balance fuel systems.	3
13.14 Hydraulic Power (ATA 29)	
System lay-out;	1
Hydraulic fluids;	1
Hydraulic reservoirs and accumulators;	1
Pressure generation: electrical, mechanical, pneumatic;	3
Emergency pressure generation;	3

	LEVEL
	B2
Filters;	1
Pressure control;	3
Power distribution;	1
Indication and warning systems;	3
Interface with other systems.	3
13.15 Ice and Rain Protection (ATA 30)	
Ice formation, classification and detection;	2
Anti-icing systems: electrical, hot air and chemical;	2
De-icing systems: electrical, hot air, pneumatic, chemical;	3
Rain repellent;	1
Probe and drain heating;	3
Wiper Systems.	1
13.16 Landing Gear (ATA 32)	
Construction, shock absorbing;	1
Extension and retraction systems: normal and emergency;	3
Indications and warnings;	3
Wheels, brakes, antiskid and autobraking;	3
Tyres;	1
Steering;	3
Air-ground sensing.	3
13.17 Oxygen (ATA 35)	
System lay-out: cockpit, cabin;	3
Sources, storage, charging and distribution;	3
Supply regulation;	3
Indications and warnings.	3
13.18 Pneumatic/Vacuum (ATA 36)	
System lay-out;	2
Sources: engine/APU, compressors, reservoirs, ground supply;	2
Pressure control;	3
Distribution;	1

	LEVEL
	B2
Indications and warnings;	3
Interfaces with other systems.	3
13.19 Water/Waste (ATA 38)	2
Water system lay-out, supply, distribution, servicing and draining;	
Toilet system lay-out, flushing and servicing.	
13.20 Integrated Modular Avionics (ATA42)	3
Functions that may be typically integrated in the Integrated Modular Avionic (IMA) modules are, among others:	
Bleed Management, Air Pressure Control, Air Ventilation and Control, Avionics and Cockpit Ventilation Control, Temperature Control, Air Traffic Communication, Avionics Communication Router, Electrical Load Management, Circuit Breaker Monitoring, Electrical System BITE, Fuel Management, Braking Control, Steering Control, Landing Gear Extension and Retraction, Tyre Pressure Indication, Oleo Pressure Indication, Brake Temperature Monitoring, etc.;	
Core System;	
Network Components.	
13.21 Cabin Systems (ATA44)	3
The units and components which furnish a means of entertaining the passengers and providing communication within the aircraft (Cabin Inter- communication Data System) and between the aircraft cabin and ground stations (Cabin Network Service). Includes voice, data, music and video transmissions.	
The Cabin Intercommunication Data System provides an interface between cockpit/cabin crew and cabin systems. These systems support data exchange of the different related LRU's and they are typically operated via Flight Attendant Panels.	
The Cabin Network Service typically consists on a server, typically inter- facing with, among others, the following systems:	
— Data/Radio Communication, In-Flight Entertainment System.	
The Cabin Network Service may host functions such as:	
<ul> <li>Access to pre-departure/departure reports,</li> </ul>	
— E-mail/intranet/Internet access,	
— Passenger database;	
Cabin Core System;	
In-flight Entertainment System;	
External Communication System;	

	LEVEL	
	B2	
Cabin Mass Memory System;		
Cabin Monitoring System;		
Miscellaneous Cabin System.		
13.22 Information Systems (ATA46)	3	
The units and components which furnish a means of storing, updating and retrieving digital information traditionally provided on paper, microfilm or microfiche. Includes units that are dedicated to the information storage and retrieval function such as the electronic library mass storage and controller. Does not include units or components installed for other uses and shared with other systems, such as flight deck printer or general use display.		
Typical examples include Air Traffic and Information Management Systems and Network Server Systems.		
Aircraft General Information System;		
Flight Deck Information System;		
Maintenance Information System;		
Passenger Cabin Information System;		
Miscellaneous Information System.		

## MODULE 14. PROPULSION

	LEVEL
	B2
14.1 Turbine Engines	
(a) Constructional arrangement and operation of turbojet, turbofan, turboshaft and turbopropeller engines;	1
(b) Electronic Engine control and fuel metering systems (FADEC).	2
14.2 Engine Indicating Systems	2
Exhaust gas temperature/Interstage turbine temperature systems;	
Engine speed;	
Engine Thrust Indication: Engine Pressure Ratio, engine turbine discharge pressure or jet pipe pressure systems;	
Oil pressure and temperature;	
Fuel pressure, temperature and flow;	
Manifold pressure;	
Engine torque;	
Propeller speed.	

	LEVEL
	B2
14.3 Starting and Ignition Systems	2
Operation of engine start systems and components;	
Ignition systems and components;	
Maintenance safety requirements.	

	LEVEL	
	А	B1
15.1 Fundamentals	1	2
Potential energy, kinetic energy, Newton's laws of motion, Brayton cycle;		
The relationship between force, work, power, energy, velocity, acceleration;		
Constructional arrangement and operation of turbojet, turbofan, turboshaft, turboprop.		
15.2 Engine Performance	—	2
Gross thrust, net thrust, choked nozzle thrust, thrust distribution, resultant thrust, thrust horsepower, equivalent shaft horsepower, specific fuel consumption;		
Engine efficiencies;		
By-pass ratio and engine pressure ratio;		
Pressure, temperature and velocity of the gas flow;		
Engine ratings, static thrust, influence of speed, altitude and hot climate, flat rating, limitations.		
15.3 <b>Inlet</b>	2	2
Compressor inlet ducts		
Effects of various inlet configurations;		
Ice protection.		
15.4 Compressors	1	2
Axial and centrifugal types;		
Constructional features and operating principles and applications;		
Fan balancing;		
Operation:		
Causes and effects of compressor stall and surge;		
Methods of air flow control: bleed valves, variable inlet guide vanes, variable stator vanes, rotating stator blades;		

	LEVEL	
	А	B1
Compressor ratio.		
15.5 Combustion Section	1	2
Constructional features and principles of operation.		
15.6 Turbine Section	2	2
Operation and characteristics of different turbine blade types;		
Blade to disk attachment;		
Nozzle guide vanes;		
Causes and effects of turbine blade stress and creep.		
15.7 Exhaust	1	2
Constructional features and principles of operation;		
Convergent, divergent and variable area nozzles;		
Engine noise reduction;		
Thrust reversers.		
15.8 Bearings and Seals	_	2
Constructional features and principles of operation.		
15.9 Lubricants and Fuels	1	2
Properties and specifications;		
Fuel additives;		
Safety precautions.		
15.10 Lubrication Systems	1	2
System operation/lay-out and components.		
15.11 Fuel Systems	1	2
Operation of engine control and fuel metering systems including electronic engine control (FADEC);		
Systems lay-out and components.		
15.12 Air Systems	1	2
Operation of engine air distribution and anti-ice control systems, including internal cooling, sealing and external air services.		
15.13 Starting and Ignition Systems	1	2
Operation of engine start systems and components;		
Ignition systems and components;		
Maintenance safety requirements.		

	LEVEL	
	А	B1
15.14 Engine Indication Systems	1	2
Exhaust Gas Temperature/Interstage Turbine Temperature;		
Engine Thrust Indication: Engine Pressure Ratio, engine turbine discharge pressure or jet pipe pressure systems;		
Oil pressure and temperature;		
Fuel pressure and flow;		
Engine speed;		
Vibration measurement and indication;		
Torque;		
Power.		
15.15 Power Augmentation Systems	_	1
Operation and applications; Water		
injection, water methanol;		
Afterburner systems.		
15.16 Turbo-prop Engines	1	2
Gas coupled/free turbine and gear coupled turbines;		
Reduction gears;		
Integrated engine and propeller controls;		
Overspeed safety devices.		
15.17 Turbo-shaft Engines	1	2
Arrangements, drive systems, reduction gearing, couplings, control systems.		
15.18 Auxiliary Power Units (APUs)	1	2
Purpose, operation, protective systems.		
15.19 Powerplant Installation	1	2
Configuration of firewalls, cowlings, acoustic panels, engine mounts, anti-vibration mounts, hoses, pipes, feeders, connectors, wiring looms, control cables and rods, lifting points and drains.		
15.20 Fire Protection Systems	1	2
Operation of detection and extinguishing systems.		

	LEVEL	
	А	B1
15.21 Engine Monitoring and Ground Operation	1	3
Procedures for starting and ground run-up;		
Interpretation of engine power output and parameters;		
Trend (including oil analysis, vibration and boroscope) monitoring;		
Inspection of engine and components to criteria, tolerances and data specified by engine manufacturer;		
Compressor washing/cleaning;		
Foreign Object Damage.		
15.22 Engine Storage and Preservation	—	2
Preservation and depreservation for the engine and accessories/systems.		

## MODULE 16. PISTON ENGINR

LEVEL			
А	B1	B3	
16.1 Fundamentals	1	2	2
---	---	---	---
Mechanical, thermal and volumetric efficiencies;			
Operating principles — 2 stroke, 4 stroke, Otto and Diesel;			
Piston displacement and compression ratio;			
Engine configuration and firing order.			
16.2 Engine Performance	1	2	2
Power calculation and measurement;			
Factors affecting engine power;			
Mixtures/leaning, pre-ignition.			
16.3 Engine Construction	1	2	2
Crank case, crank shaft, cam shafts, sumps;			
Accessory gearbox;			
Cylinder and piston assemblies;			
Connecting rods, inlet and exhaust manifolds;			
Valve mechanisms;			

		LEVEL	
	А	B1	В3
Propeller reduction gearboxes.			
16.4 Engine Fuel Systems			
16.4.1 Carburettors	1	2	2
Types, construction and principles of operation;			
Icing and heating.			
16.4.2 Fuel injection systems	1	2	2
Types, construction and principles of operation.			
16.4.3 Electronic engine control	1	2	2
Operation of engine control and fuel metering systems including electronic engine control (FADEC);			
Systems lay-out and components.			
16.5 Starting and Ignition Systems	1	2	2
Starting systems, pre-heat systems;			
Magneto types, construction and principles of operation;			
Ignition harnesses, spark plugs;			
Low and high tension systems.			
16.6 Induction, Exhaust and Cooling Systems	1	2	2
Construction and operation of: induction systems including alternate air systems;			
Exhaust systems, engine cooling systems — air and liquid.			
16.7 Supercharging/Turbocharging	1	2	2
Principles and purpose of supercharging and its effects on engine parameters;			
Construction and operation of supercharging/turbo- charging systems;			
System terminology;			
Control systems;			
System protection.			
16.8 Lubricants and Fuels	1	2	2
Properties and specifications;			
Fuel additives;			

		LEVEL	
	А	B1	В3
Safety precautions.			
16.9 Lubrication Systems	1	2	2
System operation/lay-out and components.			
16.10 Engine Indication Systems	1	2	2
Engine speed;			
Cylinder head temperature;			
Coolant temperature;			
Oil pressure and temperature;			
Exhaust Gas Temperature;			
Fuel pressure and flow;			
Manifold pressure.			
16.11 Powerplant Installation	1	2	2
Configuration of firewalls, cowlings, acoustic panels, engine mounts, anti-vibration mounts, hoses, pipes, feeders, connectors, wiring looms, control cables and rods, lifting points and drains.			
16.12 Engine Monitoring and Ground Operation	1	3	2
Procedures for starting and ground run-up;			
Interpretation of engine power output and parameters;			
Inspection of engine and components: criteria, tolerances, and data specified by engine manufacturer.			
16.13 Engine Storage and Preservation	_	2	1
Preservation and depreservation for the engine and accessories/systems.			

#### MODULE 17A. PROPELLER

*Note:* This module does not apply to category B3. Relevant subject matters for category B3 are defined in module 17B.

	LE	VEL
	А	B1
17.1 Fundamentals	1	2
Blade element theory;		

	LE	VEL
	А	B1
High/low blade angle, reverse angle, angle of attack, rotational speed;		
Propeller slip;		
Aerodynamic, centrifugal, and thrust forces;		
Torque;		
Relative airflow on blade angle of attack;		
Vibration and resonance.		
17.2 Propeller Construction	1	2
Construction methods and materials used in wooden, composite and metal propellers;		
Blade station, blade face, blade shank, blade back and hub assembly;		
Fixed pitch, controllable pitch, constant speeding propeller;		
Propeller/spinner installation.		
17.3 Propeller Pitch Control	1	2
Speed control and pitch change methods, mechanical and electrical/elec-tronic;		
Feathering and reverse pitch;		
Overspeed protection.		
17.4 Propeller Synchronising	_	2
Synchronising and synchrophasing equipment.		
17.5 Propeller Ice Protection	1	2
Fluid and electrical de-icing equipment.		
17.6 Propeller Maintenance	1	3
Static and dynamic balancing;		
Blade tracking;		
Assessment of blade damage, erosion, corrosion, impact damage, delami- nation;		
Propeller treatment/repair schemes;		
Propeller engine running.		
17.7 Propeller Storage and Preservation	1	2
Propeller preservation and depreservation.		

#### MODULE 17B. PROPELLER

*Note:* The scope of this Module shall reflect the propeller technology of aeroplanes pertinent to the B3 category.

	LEVEL
	В3
17.1 Fundamentals	2
Blade element theory;	
High/low blade angle, reverse angle, angle of attack, rotational speed;	
Propeller slip;	
Aerodynamic, centrifugal, and thrust forces;	
Torque;	
Relative airflow on blade angle of attack;	
Vibration and resonance.	
17.2 Propeller Construction	2
Construction methods and material used in wooden, composite and metal propellers;	
Blade station, blade face, blade shank, blade back and hub assembly;	
Fixed pitch, controllable pitch, constant speeding propeller;	
Propeller/spinner installation.	
17.3 Propeller Pitch Control	2
Speed control and pitch change methods, mechanical and electrical/elec-tronic;	
Feathering and reverse pitch;	
Overspeed protection.	
17.4 Propeller Synchronising	2
Synchronising and synchrophasing equipment.	
17.5 Propeller Ice Protection	2
Fluid and electrical de-icing equipment.	
17.6 Propeller Maintenance	2
Static and dynamic balancing;	
Blade tracking;	
Assessment of blade damage, erosion, corrosion, impact damage, delami- nation;	
Propeller treatment/repair schemes;	
Propeller engine running.	
17.7 Propeller Storage and Preservation	2
Propeller preservation and depreservation.	

# IS 2.6.1.8 EXPERIENCE REQUIREMENTS FOR EXTENDING A PART 2 AIRCRAFT MAINTENANCE LICENSE

The table below shows the experience requirements for adding a new category or subcategory to an existing Part 2 license.

The experience shall be practical maintenance experience on operating aircraft in the subcategory relevant to the application.

The experience requirement will be reduced by 50 % if the applicant has completed an approved Part 3 course relevant to the subcategory.

To From	Al	A2	A3	A4	B1.1	B1.2	B1.3	B1.4	B2	В3
A1		6 months	6 months	6 months	2 years	6 months	2 years	1 year	2 years	6 months
A2	6 months	_	6 months	6 months	2 years	6 months	2 years	1 year	2 years	6 months
A3	6 months	6 months	_	6 months	2 years	1 year	2 years	6 months	2 years	1 year
A4	6 months	6 months	6 months		2 years	1 year	2 years	6 months 2 years		1 year
B1.1	None	6 months	6 months	6 months		6 months	6 months	6 months	1 year	6 months
B1.2	6 months	None	6 months	6 months	2 years		2 years	6 months	2 years	None
B1.3	6 months	6 months	None	6 months	6 months	6 months	_	6 months	1 year	6 months
B1.4	6 months	6 months	6 months	None	2 years	6 months	2 years	_	2 years	6 months
B2	6 months	6 months	6 months	6 months	1 year	1 year	1 year	1 year	_	1 year
B3	6 months	None	6 months	6 months	2 years	6 months	2 years	1 year	2 years	_

# IS 2.6.1.11 AIRCRAFT TYPE TRAINING AND EXAMINATION STANDARD

## On the Job Training

#### 1. General

Aircraft type training shall consist of theoretical training and examination, and, except for the category C ratings, skill test.

- (a) Theoretical training and examination shall comply with the following requirements:
  - Shall be conducted by a maintenance training organization appropriately approved in accordance with (Part 3) or, when conducted by other organizations, as directly approved by the Authority.
  - (ii) Shall comply with the standard described in paragraph 3.1 and 4 of this IS 2.6.1.11, except as permitted by the differences training described below.

- (iii) In the case of a category C person qualified by holding an academic degree as specified in point 2.6.1.8 (a)(5), the first relevant aircraft type theoretical training shall be at the category B1 or B2 level.
- (iv) Shall have been started and completed within the 3 years preceding the application for a type rating endorsement.
- (b) Skill test shall comply with the following requirements:
  - Shall be conducted by a maintenance training organization appropriately approved in accordance with (Part-3) or, when conducted by other organizations, as directly approved by the Authority.
  - (ii) Shall comply with the standard described in paragraph 3.2 and 4 of this IS 2.6.1.11, except as permitted by the differences training described below.
  - (iii) Shall include a representative cross section of maintenance activities relevant to the aircraft type.
  - (iv) Shall include demonstrations using equipment, components, simulators, other training devices or aircraft.
  - (v) Shall have been started and completed within the 3 years preceding the application for a type rating endorsement.

## (c) Differences training

- (i) Differences training is the training required in order to cover the differences between two different aircraft type ratings of the same manufacturer as determined by the Authority.
- (ii) Differences training has to be defined on a case-to-case basis taking into account the requirements contained in this IS 2.6.1.11 in respect of both theoretical and practical elements of type rating training.
- (iii) A type rating shall only be endorsed on a license after differences training when the applicant also complies with one of the following conditions:
  - having already endorsed on the license the aircraft type rating from which the differences are being identified, or
  - having completed the type training requirements for the aircraft from which the differences are being identified.

## 2. Aircraft type training levels

The three levels listed below define the objectives, the depth of training and the level of knowledge that the training is intended to achieve.

 Level 1: A brief overview of the airframe, systems and powerplant as outlined in the Systems Description Section of the Aircraft Maintenance Manual/Instructions for Continued Airworthiness.

Course objectives: Upon completion of Level 1 training, the student will be able to:

- provide a simple description of the whole subject, using common words and examples, using typical terms and identify safety precautions related to the airframe, its systems and powerplant;
- (b) identify aircraft manuals, maintenance practices important to the airframe, its systems and powerplant;
- (c) define the general layout of the aircraft's major systems;
- (d) define the general layout and characteristics of the powerplant;
- (e) identify special tooling and test equipment used with the aircraft.
- Level 2: Basic system overview of controls, indicators, principal components, including their location and purpose, servicing and minor troubleshooting.
  General knowledge of the theoretical and practical aspects of the subject.

Course objectives: In addition to the information contained in the Level 1 training, at the completion of Level 2 training, the student will be able to:

- (a) understand the theoretical fundamentals; apply knowledge in a practical manner using detailed procedures;
- (b) recall the safety precautions to be observed when working on or near the aircraft, powerplant and systems;
- (c) describe systems and aircraft handling particularly access, power availability and sources;
- (d) identify the locations of the principal components;
- (e) explain the normal functioning of each major system, including terminology and nomenclature;
- (f) perform the procedures for servicing associated with the aircraft for the following systems: Fuel, Power Plants, Hydraulics, Landing Gear, Water/Waste, and Oxygen;
- (g) demonstrate proficiency in use of crew reports and on-board reporting systems (minor troubleshooting) and determine aircraft airworthiness per the MEL/CDL;
- (h) demonstrate the use, interpretation and application of appropriate documentation including instructions for continued airworthiness, maintenance manual, illustrated parts catalogue, etc.
- Level 3: Detailed description, operation, component location, removal/ installation and bite and troubleshooting procedures to maintenance manual level.

Course objectives: In addition to the information contained in Level 1 and Level 2 training, at the completion of Level 3 training, the student will be able to:

- (a) demonstrate a theoretical knowledge of aircraft systems and structures and interrelationships with other systems, provide a detailed description of the subject using theoretical fundamentals and specific examples and to interpret results from various sources and measurements and apply corrective action where appropriate;
- (b) perform system, powerplant, component and functional checks as specified in the aircraft maintenance manual;
- (c) demonstrate the use, interpret and apply appropriate documentation including structural repair manual, troubleshooting manual, etc.;
- (d) correlate information for the purpose of making decisions in respect of fault diagnosis and rectification to maintenance manual level;
- (e) describe procedures for replacement of components unique to aircraft type.

#### 3. Aircraft type training standard

Although aircraft type training includes both theoretical and practical elements, courses can be approved for the theoretical element, the practical element or for a combination of both.

- 3.1. Theoretical element
  - (a) Objective:

On completion of a theoretical training course the student shall be able to demonstrate, to the levels identified in the S 2.6.1.11 syllabus, the detailed theoretical knowledge of the aircraft's applicable systems, structure, operations, maintenance, repair, and troubleshooting according to approved maintenance data. The student shall be able to demonstrate the use of manuals and approved procedures, including the knowledge of relevant inspections and limitations.

(b) Level of training:

Training levels are those levels defined in point 2 above.

After the first type course for category C certifying staff all subsequent courses need only be to level 1.

During a level 3 theoretical training, level 1 and 2 training material may be used to teach the full scope of the chapter if required. However, during the training the majority of the course material and training time shall be at the higher level.

(c) Duration:

The theoretical training minimum tuition hours are contained in the following

table:

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Category		Hours	
Aeroplanes with a maximum take-o	ff mass abov	e 30 000 kg:	
B1.1		150	
B1.2		120	
B2		100	
C		30	
Aeroplanes with a maximum take- 30 000 kg and above 5 700 kg:	off mass eqi	ual or less than	
B1.1		120	
B1.2		100	
B2		100	
С		25	
Aeroplanes with a maximum take-o	off mass of 5	700 kg and below $(^1)$	
B1.1		80	
B1.2		60	
B2		60	
С		15	
Helicopters ( <sup>2</sup> )			
B1.3		120	
B1.4		100	
B2		100	
С		25	
(1) For non-pressurized piston engine	aeroplanes bel	ow 2000 kg MTOM the	minimum duration can be reduced by

50 %.  $(^2)$  For helicopters in group 2 (as defined in point 2.6.1.11) the minimum duration can be reduced by 30 %.

For the purpose of the table above, a tuition hour means 60 minutes of teaching and exclude any breaks, examination, revision, preparation and aircraft visit.

These hours apply only to theoretical courses for complete aircraft/ engine combinations according to the type rating as defined by the Authority.

(d) Justification of course duration:

> Training courses carried out in a maintenance training organization approved in accordance with (Part-3) and courses directly approved by the Authority shall

justify their hour duration and the coverage of the full syllabus by a training needs analysis based on:

- the design of the aircraft type, its maintenance needs and the types of operation,
- detailed analysis of applicable chapters see contents table in point 3.1(e) below,
- detailed competency analysis showing that the objectives as stated in point 3.1(a) above are fully met.

Where the training needs analysis shows that more hours are needed, course lengths shall be longer than the minimum specified in the table.

Similarly, tuition hours of differences courses or other training course combinations (such as combined B1/B2 courses), and in cases of theoretical type training courses below the figures given in point 3.1(c) above, these shall be justified to the Authority by the training needs analysis as described above.

In addition, the course must describe and justify the following:

- The minimum attendance required to the trainee, in order to meet the objectives of the course.
- The maximum number of hours of training per day, taking into account pedagogical and human factors principles.

If the minimum attendance required is not met, the certificate of recognition shall not be issued. Additional training may be provided by the training organization in order to meet the minimum attendance time.

(e) Content:

As a minimum, the elements in the Syllabus below that are specific to the aircraft type shall be covered. Additional elements introduced due to type variations, technological changes, etc. shall also be included.

The training syllabus shall be focused on mechanical and electrical aspects for B1 personnel, and electrical and avionic aspects for B2.

Level Chapters	Aeroplanes	turbine	Aeroplanes	piston	Helicopters	turbine	Helicopters	piston	Avionics
License category.	B1	С	B1	С	B1	С	B1	С	B2

Intro	duction module:									
05	Time limits/maintenance checks	1	1	1	1	1	1	1	1	1
06	Dimensions/Areas (MTOM, etc.)	1	1	1	1	1	1	1	1	1
07	Lifting and Shoring	1	1	1	1	1	1	1	1	1
08	Levelling and weighing	1	1	1	1	1	1	1	1	1

Level Chapters		Aeroplanes	turbine	Aeroplanes	piston	Helicopters	turbine	Helicopters	piston	Avionics
	License category.	B1	С	B1	С	B1	С	B1	С	B2
09	Towing and taxiing	1	1	1	1	1	1	1	1	1
10	Parking/mooring, Storing and Return to Service	1	1	1	1	1	1	1	1	1
11	Placards and Markings	1	1	1	1	1	1	1	1	1
12	Servicing	1	1	1	1	1	1	1	1	1
20	Standard practices — only type particular	1	1	1	1	1	1	1	1	1
Helic	opters									
18	Vibration and Noise Analysis (Blade tracking)	—	_	_	—	3	1	3	1	_
60	Standard Practices Rotor	_			_	3	1	3	1	_
62	Rotors	_			_	3	1	3	1	1
62A	Rotors — Monitoring and indi- cating	_	_	_	_	3	1	3	1	3
63	Rotor Drives	_			_	3	1	3	1	1
63A	Rotor Drives — Monitoring and indicating	—	_	_	—	3	1	3	1	3
64	Tail Rotor					3	1	3	1	1
64A	Tail rotor — Monitoring and indi- cating	—	_	_	—	3	1	3	1	3
65	Tail Rotor Drive	_	_	_	_	3	1	3	1	1
65A	Tail Rotor Drive — Monitoring and indicating	—	—	—	—	3	1	3	1	3
66	Folding Blades/Pylon	_	_	_	_	3	1	3	1	_
67	Rotors Flight Control	—		_	—	3	1	3	1	—
53	Airframe Structure (Helicopter)	—	—	—	—	3	1	3	1	_
25	Emergency Flotation Equipment	—	—	—	—	3	1	3	1	1
Airfr	ame structures									
51	Standard practices and structures (damage classification, assessment and repair)	3	1	3	1			_	_	1
53	Fuselage	3	1	3	1	_		_	_	1
54	Nacelles/Pylons	3	1	3	1	_	_	_	_	1
55	Stabilisers	3	1	3	1	_		_	_	1

	Level Chapters		turbine	Aeroplanes	piston	Helicopters	turbine	Helicopters	piston	Avionics	
	License category.	B1	С	B1	С	B1	С	B1	С	B2	
56	Windows	3	1	3	1			_		1	
57	Wings	3	1	3	1		_	_		1	
27A	Flight Control Surfaces (All)	3	1	3	1			_		1	
52	Doors	3	1	3	1	_		_		1	
Zona	l and Station Identification Systems.	1	1	1	1	1	1	1	1	1	
Airfr	ame systems:										
21	Air Conditioning	3	1	3	1	3	1	3	1	3	
21A	Air Supply	3	1	3	1	1	3	3	1	2	
21B	Pressurization	3	1	3	1	3	1	3	1	3	
21C	Safety and Warning Devices	3	1	3	1	3	1	3	1	3	
22	Autoflight	2	1	2	1	2	1	2	1	3	
23	Communications	2	1	2	1	2	1	2	1	3	
24	Electrical Power	3	1	3	1	3	1	3	1	3	
25	Equipment and Furnishings	3	1	3	1	3	1	3	1	1	
25A	Electronic Equipment including emergency equipment	1	1	1	1	1	1	1	1	3	
26	Fire Protection	3	1	3	1	3	1	3	1	3	
27	Flight Controls	3	1	3	1	3	1	3	1	2	
27A	Sys. Operation: Electrical/Fly-by- Wire	3	1	_	—	_	_	—	_	3	
28	Fuel Systems	3	1	3	1	3	1	3	1	2	
28A	Fuel Systems — Monitoring and indicating	3	1	3	1	3	1	3	1	3	
29	Hydraulic Power	3	1	3	1	3	1	3	1	2	
29A	Hydraulic Power — Monitoring and indicating	3	1	3	1	3	1	3	1	3	
30	Ice and Rain Protection	3	1	3	1	3	1	3	1	3	

	Level Chapters	Aeroplanes	turbine	Aeroplanes	piston	Helicopters	turbine	Helicopters	piston	Avionics
	License category.	B1	С	B1	С	B1	С	B1	С	B2
31	Indicating/Recording Systems	3	1	3	1	3	1	3	1	3
31A	Instrument Systems	3	1	3	1	3	1	1	3	3
32	Landing Gear	3	1	3	1	3	1	3	1	2
32A	Landing Gear — Monitoring and indicating	3	1	3	1	3	1	3	1	3
33	Lights	3	1	3	1	3	1	3	1	3
34	Navigation	2	1	2	1	2	1	2	1	3
35	Oxygen	3	1	3	1	_		_	_	2
36	Pneumatic	3	1	3	1	3	1	3	1	2
36A	Pneumatic — Monitoring and indi- cating	3	1	3	1	3	1	3	1	3
37	Vacuum	3	1	3	1	3	1	3	1	2
38	Water/Waste	3	1	3	1	_	_		_	2
41	Water Ballast	3	1	3	1					1
42	Integrated modular avionics	2	1	2	1	2	1	2	1	3
44	Cabin Systems	2	1	2	1	2	1	2	1	3
45	On-Board Maintenance System (or covered in 31)	3	1	3	1	3	1	_	_	3
46	Information Systems	2	1	2	1	2	1	2	1	3
50	Cargo and Accessory Compartments	3	1	3	1	3	1	3	1	1
Turb	ine Engine									
70	Standard Practices — Engines,	3	1			3	1			1
70A	constructional arrangement and operation (Installation Inlet, Compressors, Combustion Section, Turbine Section, Bearings and Seals, Lubrication Systems).	3	1			3	1			1
70B	Engine Performance	3	1		_	3	1			1
71	Powerplant	3	1	_		3	1		_	1
72	Engine Turbine/Turbo Prop/Ducted Fan/Unducted fan	3	1	_	_	3	1	_	_	1
73	Engine Fuel and Control	3	1		_	3	1			1

	Level Chapters		Aeroplanes turbine		Aeroplanes piston		turbine	Helicopters	Avionics	
	License category.	B1	С	B1	С	B1	С	B1	С	B2
75	Air	3	1	_		3	1			1
76	Engine controls	3	1	_	_	3	1	_	_	1
78	Exhaust	3	1	_	_	3	1	_	_	1
79	Oil	3	1	_	_	3	1	_	_	1
80	Starting	3	1	_	_	3	1	_	_	1
82	Water Injections	3	1	_	_	3	1	_	_	1
83	Accessory Gear Boxes	3	1	_	_	3	1	_	_	1
84	Propulsion Augmentation	3	1			3	1			1
73A	FADEC	3	1			3	1			3
74	Ignition	3	1	_	_	3	1	_		3
77	Engine Indicating Systems	3	1			3	1			3
49	Auxiliary Power Units (APUs)	3	1							2
Pisto	n Engine									
70	Standard Practices — Engines			3	1		_	3	1	1
70A	Constructional arrangement and operation (Installation, Carburettors, Fuel injection systems, Induction, Exhaust and Cooling Systems, Supercharging/Turbocharging, Lubrication Systems).			3	1			3	1	1
70B	Engine Performance	_	_	3	1			3	1	1
71	Powerplant	_	_	3	1	_		3	1	1
73	Engine Fuel and Control	_	_	3	1	_		3	1	1
76	Engine Control	_	_	3	1	_	_	3	1	1
79	Oil	_	_	3	1	_		3	1	1
80	Starting	_	_	3	1			3	1	1
81	Turbines	_	_	3	1	_		3	1	1
82	Water Injections	_	_	3	1	_		3	1	1
83	Accessory Gear Boxes	_	_	3	1	_	_	3	1	1
84	Propulsion Augmentation	_	_	3	1	_		3	1	1

	Level Chapters	Aeroplanes	, turbine	Aeroplanes	piston	Helicopters	turbine	Helicopters	Avionics	
	License category.	B1	С	B1	С	B1	С	B1	С	B2
73A	FADEC			3	1			3	1	3
74	Ignition			3	1			3	1	3
77	Engine Indication Systems			3	1			3	1	3
Prope	ellers									
60A	Standard Practices — Propeller	3	1	3	1					1
61	Propellers/Propulsion	3	1	3	1		_	_		1
61A	Propeller Construction	3	1	3	1		_			
61B	Propeller Pitch Control	3	1	3	1					
61C	Propeller Synchronising	3	1	3	1		_	_		1
61D	Propeller Electronic control	2	1	2	1					3
61E	Propeller Ice Protection	3	1	3	1		_			
61F	Propeller Maintenance	3	1	3	1					1

(f) Multimedia Based Training (MBT) methods may be used to satisfy the theoretical training element either in the classroom or in a virtual controlled environment subject to the acceptance of the Authority approving the training course.

#### 1.2. Skill test element

(a) Objective:

The objective of skill test is to gain the required competence in performing safe maintenance, inspections and routine work according to the maintenance manual and other relevant instructions and tasks as appropriate for the type of aircraft, for example troubleshooting, repairs, adjustments, replacements, rigging and functional checks. It includes the awareness of the use of all technical literature and documentation for the aircraft, the use of specialist/special tooling and test equipment for performing removal and replacement of components and modules unique to type, including any on-wing maintenance activity.

(b) Content:

At least 50 % of the crossed items in the table below, which are relevant to the particular aircraft type, shall be completed as part of the skill test.

Tasks crossed represent subjects that are important for skill test purposes to ensure that the operation, function, installation and safety significance of key maintenance

tasks is adequately addressed; particularly where these cannot be fully explained by theoretical training alone. Although the list details the minimum skill test subjects, other items may be added where applicable to the particular aircraft type.

Tasks to be completed shall be representative of the aircraft and systems both in complexity and in the technical input required to complete that task. While relatively simple tasks may be included, other more complex tasks shall also be incorporated and undertaken as appropriate to the aircraft type.

Glossary of the table: LOC: Location; FOT: Functional/Operational Test; SGH: Service and Ground Handling; R/I: Removal/Installation; MEL: Minimum Equipment List; TS: Troubleshooting.

		B1/B2			B1					В2		
	Chapters	LOC	FOT	SGH	R=I	MEL	TS	FOT	SGH	R=I	MEL	ST
Intro	duction module:											
5	Time limits/main- tenance checks	X/X	_		_		_	—	_		_	_
6	Dimensions/Areas (MTOM, etc.)	X/X	_	_	—	_	_	—	_	_	_	
7	Lifting and Shoring	X/X	_		_		_		_		_	_
8	Levelling and weighing	X/X	_	Х	_		_		Х		_	_
9	Towing and taxiing	X/X	_	Х	_		_		Х			—
10	Parking/mooring, Storing and Return to Service	X/X		Х					Х			_
11	Placards and Markings	X/X			_				_			—
12	Servicing	X/X	_	Х	_		_	_	X		_	_
20	Standard practices — only type particular	X/X	_	X			_		X		_	
Helio	copters:											
18	Vibration and Noise Analysis (Blade tracking)	X/—	_		_		Х	_	_		_	
60	Standard Practices Rotor — only type specific	X/X		Х					Х			
62	Rotors	X/—	—	х	х		Х				—	_

		B1/B2			B1	B2						
	Chapters	LOC	FOT	SGH	R=I	MEL	ST	FOT	SGH	R=I	MEL	ST
62A	Rotors — Monitoring and indicating	X/X	X	х	х	X	Х			X		X
63	Rotor Drives	X/—	Х	_	_	_	Х	_	_	_	_	_
63A	Rotor Drives — Monitoring and indi- cating	X/X	Х		Х	Х	Х			х		Х
64	Tail Rotor	X/—	—	х	_	_	Х		_	—	_	_
64A	Tail rotor -Monitoring and indicating	X/X	Х		Х	Х	Х		_	Х		Х
65	Tail Rotor Drive	X/—	Х	_	_		Х	_	_		_	
65A	Tail Rotor Drive — Monitoring and indi- cating	X/X	Х		Х	Х	Х			Х		Х
66	Folding Blades/Pylon	X/	Х	х	_		Х		_	_		
67	Rotors Flight Control	X/—	Х	х	_	Х	Х	_	_	_	_	_
53	Airframe Structure (Helicopter)											
	Note: covered under Airframe structures											
25	Emergency Flotation Equipment	X/X	X	Х	Х	X	X	Х	Х		_	
Airfr	ame structures:											
51	Standard Practices and Structures (damage classification, assessment and repair)											
53	Fuselage	X/—	—	_			Х				_	
54	Nacelles/Pylons	X/—	_	_	_		_	_	_	_	_	_
55	Stabilisers	X/—		_	_		_		_		_	

		B1/B2			B1			B2					
	Chapters		FOT	SGH	R=I	MEL	ST	FOT	SGH	R=I	MEL	TS	
56	Windows	X/—	_				Х						
57	Wings	X/—	_				_		_	_	_		
27A	Flight Control Surfaces	X/—	_	_	_		Х		_		_		
52	Doors	X/X	Х	х			_		х				
Airfr	ame systems:												
21	Air Conditioning	X/X	Х	х		x	Х	Х	Х	_	х	х	
21A	Air Supply	X/X	Х				—	Х	—				
21B	Pressurization	X/X	Х	_		Х	Х	Х	_		х	Х	
21C	Safety and warning Devices	X/X	—	х	_		—		Х		—		
22	Autoflight	X/X	—			Х	—	Х	х	Х	Х	Х	
23	Communications	X/X	_	х		Х	_	Х	Х	х	Х	х	
24	Electrical Power	X/X	Х	х	х	Х	Х	Х	х	х	Х	х	
25	Equipment and Furnishings	X/X	Х	х	Х		_	х	Х	Х			
25A	Electronic Equipment including emergency equipment	X/X	Х	Х	Х		_	Х	Х	Х			
26	Fire Protection	X/X	Х	х	х	Х	х	Х	х	x	х	Х	
27	Flight Controls	X/X	Х	х	х	Х	х	Х	_		_		
27A	Sys. Operation: Elec- trical/Fly-by-Wire	X/X	Х	Х	Х	Х	_	Х	—	Х		х	
28	Fuel Systems	X/X	х	x	х	х	х	Х	х		х		
28A	Fuel Systems — Monitoring and indi- cating	X/X	Х			—	_	Х	_	Х		Х	
29	Hydraulic Power	X/X	Х	X	Х	X	Х	Х	Х	_	х		
29A	Hydraulic Power — Monitoring and indi- cating	X/X	Х		Х	х	Х	Х		Х	Х	Х	
30	Ice and Rain Protection	X/X	х	x		X	х	Х	Х	_	x	х	

		B1/B2			B1		B2						
	Chapters	LOC	FOT	SGH	R=I	MEL	SL	FOT	SGH	R=I	MEL	ST	
31	Indicating/Recording Systems	X/X	X	X	X	X	X	X	X	X	X	X	
31A	Instrument Systems	X/X	Х	Х	Х	Х	х	Х	X	Х	Х	X	
32	Landing Gear	X/X	Х	Х	Х	Х	Х	Х	Х	Х	Х	—	
32A	Landing Gear — Monitoring and indi- cating	X/X	Х		Х	Х	Х	Х		Х	Х	Х	
33	Lights	X/X	Х	Х	_	Х		Х	Х	Х	Х	_	
34	Navigation	X/X		Х	_	Х	_	Х	Х	Х	Х	Х	
35	Oxygen	X/—	Х	Х	Х	_		Х	Х		_	_	
36	Pneumatic	X/—	Х		Х	Х	Х	Х	_	Х	Х	Х	
36A	Pneumatic — Moni- toring and indicating	X/X	Х	X	Х	Х	Х	Х	X	Х	Х	Х	
37	Vacuum	X/—	Х	_	Х	Х	Х		_		_	_	
38	Water/Waste	X/—	Х	Х	_			Х	Х		_	—	
41	Water Ballast	X/—	_		_		_	_	_		_	—	
42	Integrated modular avionics	X/X	_		_	—		Х	X	Х	Х	Х	
44	Cabin Systems	X/X		_	_		_	Х	Х	Х	Х	Х	
45	On-Board Main- tenance System (or covered in 31)	X/X	Х	Х	Х	Х	Х	Х	х	Х	Х	X	
46	Information Systems	X/X		_	_	_	_	Х	_	Х	Х	Х	
50	Cargo and Accessory Compartments	X/X	_	Х					_	_	_		
Turb Mod	ine/Piston Engine ule:												
70	Standard Practices — Engines — only type particular	_	_	Х	_	_			Х	_	—	_	

		B1/B2			B1	B2						
	Chapters	LOC	FOT	SGH	R=I	MEL	TS	FOT	SGH	R=I	MEL	TS
70A	Constructional arrangement and operation (Installation Inlet, Compressors, Combustion Section, Turbine Section, Bearings and Seals, Lubrication Systems)	X/X										
Turb	ine engines:											
70B	Engine Performance	_	_	_	_		Х	—	_		_	_
71	Power Plant	X/—	Х	Х	_		_	_	Х	_	_	
72	Engine Turbine/Turbo Prop/Ducted Fan/ Unducted fan	X/—	_						—			
73	Engine Fuel and Control	X/X	Х		_		_	_	_		_	
73A	FADEC Systems	X/X	Х	—	Х	Х	Х	Х	_	Х	Х	Х
74	Ignition	X/X	Х	_	_		—	Х	_		_	_
75	Air	X/—	_	_	Х		Х	—	_		_	_
76	Engine Controls	X/—	Х	_	_		Х	_	_		_	
77	Engine Indicating	X/X	Х	_	_	Х	Х	Х	_		Х	х
78	Exhaust	X/—	Х	_	_	Х	_	_	_		_	
79	Oil	X/—	_	Х	Х		_	_	_		_	
80	Starting	X/—	Х	_	_	Х	Х	_	_		_	
82	Water Injection	X/—	Х	_	_			_	_		_	
83	Accessory Gearboxes	X/—		Х				_	_		_	
84	Propulsion Augmen- tation	X/—	X		_		_	_	—		_	
Auxi (APU	liary Power Units Js):											
49	Auxiliary Power Units (APUs)	X/—	Х	Х	—		Х	_	_			

		B1/B2			B1	B2						
	Chapters	LOC	FOT	НЭS	R=I	MEL	TS	FOT	SGH	R=I	MEL	TS
Pisto	n Engines:											
70	Standard Practices — Engines — only type particular		_	Х	_				х		_	
70A	Constructional arrangement and operation (Installation Inlet, Compressors, Combustion Section, Turbine Section, Bearings and Seals, Lubrication Systems)	X/X										
70B	Engine Performance	_	—	_	—	_	Х	_	_	_	—	
71	Power Plant	X/—	Х	Х	_	_	_	_	х	_	_	_
73	Engine Fuel and Control	X/X	X		_	_	—	_			_	
73A	FADEC Systems	X/X	Х	_	Х	Х	Х	Х	Х	Х	Х	Х
74	Ignition	X/X	Х	_	_	_	_	Х	_	_	_	
76	Engine Controls	X/—	Х	_	_		Х	_	_		_	_
77	Engine Indicating	X/X	Х	_	_	Х	Х	Х	_		Х	Х
78	Exhaust	X/—	Х	_	_	Х	Х	_	_	_	_	
79	Oil	X/—	_	Х	Х	_	_	_	_		_	
80	Starting	X/—	Х	_	_	Х	Х	_	_	_	_	_
81	Turbines	X/—	Х	Х	Х	_	Х	_	_	_	_	_
82	Water Injection	X/—	Х	_	_		_	_	_	_	_	_
83	Accessory Gearboxes	X/	_	Х	Х	_	_	_	_		_	_
84	Propulsion Augmen- tation	X/—	Х		_		_				_	
Prop	ellers:											
60A	Standard Practices — Propeller	_	_		Х		_		_		—	
61	Propellers/Propulsion	X/X	х	x	_	x	х				_	

		B1/B2			B1			B2						
		D1/D2			DI					D2		1		
	Chapters	LOC	FOT	SGH	R=I	MEL	ST	FOT	SGH	R=I	MEL	TS		
61A	Propeller Construction	X/X	_	X	_		_	_	_	_	_	_		
61B	Propeller Pitch Control	X/—	Х	_	Х	Х	Х		_	_	_	_		
61C	Propeller Synchro- nising	X/—	Х		_	—	Х		_		X	_		
61D	Propeller Electronic control	X/X	х	Х	х	х	х	Х	Х	Х	Х	Х		
61E	Propeller Ice Protection	X/—	х		х	х	х		_		_			
61F	Propeller Maintenance	X/X	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х		

## 4. Type training examination and skill test standard

## 4.1. Theoretical element examination standard

After the theoretical portion of the aircraft type training has been completed, a written examination shall be performed, which shall comply with the following:

- (a) Format of the examination is of the multi-choice type. Each multi-choice question shall have 3 alternative answers of which only one shall be the correct answer. The total time is based on the total number of questions and the time for answering is based upon a nominal average of 90 seconds per question.
- (b) The incorrect alternatives shall seem equally plausible to anyone ignorant of the subject. All the alternatives shall be clearly related to the question and of similar vocabulary, grammatical construction and length.
- (c) In numerical questions, the incorrect answers shall correspond to procedural errors such as the use of incorrect sense (+ versus -) or incorrect measurement units. They shall not be mere random numbers.
- (d) The level of examination for each chapter (<sup>1</sup>) shall be the one defined in point 2 'Aircraft type training levels'. However, the use of a limited number of questions at a lower level is acceptable.
- (e) The examination shall be of the closed book type. No reference material is permitted. An exception will be made for the case of examining a B1 or B2 candidate's ability to interpret technical documents.
- (f) The number of questions shall be at least 1 question per hour of instruction. The number of questions for each chapter and level shall be proportionate to:
  - the effective training hours spent teaching at that chapter and level,

the learning objectives as given by the training needs analysis.

The Authority will assess the number and the level of the questions when approving the course.

- (7) The minimum examination pass mark is 75 %. When the type training examination is split in several examinations, each examination shall be passed with at least a 75 % mark. In order to be possible to achieve exactly a 75 % pass mark, the number of questions in the examination shall be a multiple of 4.
- (8) Penalty marking (negative points for failed questions) is not to be used.
- (9) End of module phase examinations cannot be used as part of the final examination unless they contain the correct number and level of questions required.

#### 4.2. Skill test element skill test standard

After the practical element of the aircraft type training has been completed, a skill test must be performed, which must comply with the following:

- (a) The skill test shall be performed by designated assessors appropriately qualified.
- (b) The skill test shall evaluate the knowledge and skills of the trainee.

#### 5. **Type examination standard**

Type examination shall be conducted by training organizations appropriately approved under Part 3 by the Authority.

The examination shall be oral, written or skill test based, or a combination thereof and it shall comply with the following requirements:

- (a) Oral examination questions shall be open.
- (b) Written examination questions shall be essay type or multi-choice questions.
- (c) Skill test shall determine a person's competence to perform a task.
- (d) Examinations shall be on a sample of chapters (<sup>2</sup>) drawn from paragraph 3 type training/examination syllabus, at the indicated level.
- (e) The incorrect alternatives shall seem equally plausible to anyone ignorant of the subject. All of the alternatives shall be clearly related to the question and of similar vocabulary, grammatical construction and length.
- (f) In numerical questions, the incorrect answers shall correspond to procedural errors such as corrections applied in the wrong sense or incorrect unit conversions: they shall not be mere random numbers.
- (g) The examination shall ensure that the following objectives are met:
  - 1. Properly discuss with confidence the aircraft and its systems.

<sup>(&</sup>lt;sup>1</sup>) For the purpose of this point 4, a 'chapter' means each one of the rows preceded by a number in the table contained in point 3.1(e).

- 2. Ensure safe performance of maintenance, inspections and routine work according to the maintenance manual and other relevant instructions and tasks as appropriate for the type of aircraft, for example troubleshooting, repairs, adjustments, replacements, rigging and functional checks such as engine run, etc., if required.
- 3. Correctly use all technical literature and documentation for the aircraft.
- 4. Correctly use specialist/special tooling and test equipment, perform removal and replacement of components and modules unique to type, including any on-wing maintenance activity
- (h) The following conditions apply to the examination:
  - 1. The maximum number of consecutive attempts is three. Further sets of three attempts are allowed with a 1 year waiting period between sets. A waiting period of 30 days is required after the first failed attempt within one set, and a waiting period of 60 days is required after the second failed attempt.

The applicant shall confirm in writing to the maintenance training organization or the Authority to which they apply for an examination, the number and dates of attempts during the last year and the maintenance training organization or the Authority where these attempts took place. The maintenance training organization or the Authority is responsible for checking the number of attempts within the applicable timeframes.

- 2. The type examination shall be passed and the required practical experience shall be completed within the 3 years preceding the application for the rating endorsement on the aircraft maintenance license.
- 3. Type examination shall be performed with at least one examiner present. The examiner(s) shall not have been involved in the applicant's training.
- (i) A written and signed report shall be made by the examiner(s) to explain why the candidate has passed or failed.

#### 6. On the Job Training

On the Job Training (OJT) shall be approved by the Authority who has issued the license.

It shall be conducted at and under the control of maintenance organization appropriately approved for the maintenance of the particular aircraft type and shall be assessed by designated assessors appropriately qualified.

It shall have been started and completed within the 3 years preceding the application for a type rating endorsement.

(a) Objective:

The objective of OJT is to gain the required competence and experience in performing safe maintenance.

<sup>(2)</sup> For the purpose of this point 5, a 'chapter' means each one of the rows preceded by a number in the tables contained in points 3.1(e) and 3.2(b).

# (b) Content:

OJT shall cover a cross section of tasks acceptable to the Authority. The OJT tasks to be completed shall be representative of the aircraft and systems both in complexity and in the technical input required to complete that task. While relatively simple tasks may be included, other more complex maintenance tasks shall also be incorporated and undertaken as appropriate to the aircraft type.

Each task shall be signed off by the student and countersigned by a designated supervisor. The tasks listed shall refer to an actual job card/work sheet, etc.

The final skill test of the completed OJT is mandatory and shall be performed by a designated assessor appropriately qualified.

The following data shall be addressed on the OJT worksheets/logbook:

- 1. Name of Trainee;
- 2. Date of Birth;
- 3. Approved Maintenance Organization;
- 4. Location;
- 5. Name of supervisor(s) and assessor, (including license number if applicable);
- 6. Date of task completion;
- 7. Description of task and job card/work order/tech log, etc.;
- 8. Aircraft type and aircraft registration;
- 9. Aircraft rating applied for.

In order to facilitate the verification by the Authority, demonstration of the OJT shall consist of (i) detailed worksheets/logbook and (ii) a compliance report demonstrating how the OJT meets the requirement of this Part.

# IS 2.6.2.13 BASIC EXAMINATION STANDARD

# 1. General

- 1.1. All basic examinations shall be carried out using the multi-choice question format and essay questions as specified below. The incorrect alternatives shall seem equally plausible to anyone ignorant of the subject. All of the alternatives shall be clearly related to the question and of similar vocabulary, grammatical construction and length. In numerical questions, the incorrect answers shall correspond to procedural errors such as corrections applied in the wrong sense or incorrect unit conversions: they shall not be mere random numbers.
- 1.2. Each multi-choice question shall have three alternative answers of which only one shall be the correct answer and the candidate shall be allowed a time per module which is based upon a nominal average of 75 seconds per question.
- 1.3. Each essay question requires the preparation of a written answer and the candidate shall be allowed 20 minutes to answer each such question.
- 1.4. Suitable essay questions shall be drafted and evaluated using the knowledge syllabus in IS 2.6.1.7 Modules 7A, 7B, 9A, 9B and 10.
- 1.5. Each question will have a model answer drafted for it, which will also include any known alternative answers that may be relevant for other subdivisions.
- 1.6. The model answer will also be broken down into a list of the important points known as Key Points.
- 1.7. The pass mark for each module and sub-module multi-choice part of the examination is 75 %.
- 1.8. The pass mark for each essay question is 75 % in that the candidates answer shall contain 75 % of the required key points addressed by the question and no significant error related to any required key point.
- 1.9. If either the multi-choice part only or the essay part only is failed, then it is only necessary to retake the multi-choice or essay part, as appropriate.
- 1.10. Penalty marking systems shall not be used to determine whether a candidate has passed.
- 1.11. A failed module may not be retaken for at least 90 days following the date of the failed module examination, except in the case of a maintenance training organization approved in accordance with (Part 3) which conducts a course of retraining tailored to the failed subjects in the particular module when the failed module may be retaken after 30 days.
- 1.12. The time periods required by point 2.6.1.7 apply to each individual module examination, with the exception of those module examinations which were passed as part of another category license, where the license has already been issued.
- 1.13. The maximum number of consecutive attempts for each module is three. Further sets of three attempts are allowed with a 1 year waiting period between sets.

The applicant shall confirm in writing to the approved maintenance training organization or the Authority to which they apply for an examination, the number and dates of attempts during the last year and the organization or the Authority where these attempts took place. The maintenance training organization or the Authority is responsible for checking the number of attempts within the applicable timeframes.

# 2. Number of questions per module

#### 2.1. MODULE 1 — MATHEMATICS

Category A: 16 multi-choice and 0 essay questions. Time allowed 20 minutes.

Category B1: 32 multi-choice and 0 essay questions. Time allowed 40 minutes.

Category B2: 32 multi-choice and 0 essay questions. Time allowed 40 minutes.

Category B3: 28 multi-choice and 0 essay questions. Time allowed 35 minutes.

2.2. MODULE 2 — PHYSICS

Category A: 32 multi-choice and 0 essay questions. Time allowed 40 minutes.

Category B1: 52 multi-choice and 0 essay questions. Time allowed 65 minutes.

Category B2: 52 multi-choice and 0 essay questions. Time allowed 65 minutes.

Category B3: 28 multi-choice and 0 essay questions. Time allowed 35 minutes.

2.3. MODULE 3 — ELECTRICAL FUNDAMENTALS

Category A: 20 multi-choice and 0 essay questions. Time allowed 25 minutes.

Category B1: 52 multi-choice and 0 essay questions. Time allowed 65 minutes.

Category B2: 52 multi-choice and 0 essay questions. Time allowed 65 minutes.

Category B3: 24 multi-choice and 0 essay questions. Time allowed 30 minutes.

# 2.4. MODULE 4 — ELECTRONIC FUNDAMENTALS

Category B1: 20 multi-choice and 0 essay questions. Time allowed 25 minutes.

Category B2: 40 multi-choice and 0 essay questions. Time allowed 50 minutes.

Category B3: 8 multi-choice and 0 essay questions. Time allowed 10 minutes.

2.5. MODULE 5 — DIGITAL TECHNIQUES/ELECTRONIC INSTRUMENT SYSTEMS

Category A: 16 multi-choice and 0 essay questions. Time allowed 20 minutes.

Category B1.1 and B1.3: 40 multi-choice and 0 essay questions. Time allowed 50 minutes.

Category B1.2 and B1.4: 20 multi-choice and 0 essay questions. Time allowed 25 minutes.

Category B2: 72 multi-choice and 0 essay questions. Time allowed 90 minutes.

Category B3: 16 multi-choice and 0 essay questions. Time allowed 20 minutes.

Category A: 52 multi-choice and 0 essay questions. Time allowed 65 minutes.

Category B1: 72 multi-choice and 0 essay questions. Time allowed 90 minutes.

Category B2: 60 multi-choice and 0 essay questions. Time allowed 75 minutes.

Category B3: 60 multi-choice and 0 essay questions. Time allowed 75 minutes.

#### 2.7. MODULE 7A — MAINTENANCE PRACTICES

Category A: 72 multi-choice and 2 essay questions. Time allowed 90 minutes plus 40 minutes.

Category B1: 80 multi-choice and 2 essay questions. Time allowed 100 minutes plus 40 minutes.

Category B2: 60 multi-choice and 2 essay questions. Time allowed 75 minutes plus 40 minutes.

MODULE 7B — MAINTENANCE PRACTICES

Category B3: 60 multi-choice and 2 essay questions. Time allowed 75 minutes plus 40 minutes.

2.8. MODULE 8 — BASIC AERODYNAMICS

Category A: 20 multi-choice and 0 essay questions. Time allowed 25 minutes.

Category B1: 20 multi-choice and 0 essay questions. Time allowed 25 minutes.

Category B2: 20 multi-choice and 0 essay questions. Time allowed 25 minutes.

Category B3: 20 multi-choice and 0 essay questions. Time allowed 25 minutes.

2.9. MODULE 9A — HUMAN FACTORS

Category A: 20 multi-choice and 1 essay question. Time allowed 25 minutes plus 20 minutes.

Category B1: 20 multi-choice and 1 essay question. Time allowed 25 minutes plus 20 minutes.

Category B2: 20 multi-choice and 1 essay question. Time allowed 25 minutes plus 20 minutes.

MODULE 9B — HUMAN FACTORS

Category B3: 16 multi-choice and 1 essay questions. Time allowed 20 minutes plus 20 minutes.

2.10. MODULE 10 — AVIATION LEGISLATION

Category A: 32 multi-choice and 1 essay question. Time allowed 40 minutes plus 20 minutes.

Category B1: 40 multi-choice and 1 essay question. Time allowed 50 minutes plus 20 minutes.

Category B2: 40 multi-choice and 1 essay question. Time allowed 50 minutes plus 20 minutes.

Category B3: 32 multi-choice and 1 essay questions. Time allowed 40 minutes plus 20 minutes.

# 2.11. MODULE 11A — TURBINE AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS

Category A: 108 multi-choice and 0 essay questions. Time allowed 135 minutes.

Category B1: 140 multi-choice and 0 essay questions. Time allowed 175 minutes.

MODULE 11B — PISTON AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS

Category A: 72 multi-choice and 0 essay questions. Time allowed 90 minutes.

Category B1: 100 multi-choice and 0 essay questions. Time allowed 125 minutes.

MODULE 11C — PISTON AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS

Category B3: 60 multi-choice and 0 essay questions. Time allowed

75 minutes.

2.12. MODULE 12 — HELICOPTER AERODYNAMICS, STRUCTURES AND SYSTEMS:

Category A: 100 multi-choice and 0 essay questions. Time allowed 125 minutes.

Category B1: 128 multi-choice and 0 essay questions. Time allowed 160 minutes.

2.13. MODULE 13 — AIRCRAFT A E R O D Y N A M I C S, STRUCTURES AND SYSTEMS

Category B2: 180 multi-choice and 0 essay questions. Time allowed 225 minutes. Questions and time allowed may be split into two examinations as appropriate.

2.14. MODULE 14 - PROPULSION

Category B2: 24 multi-choice and 0 essay questions. Time allowed 30 minutes.

2.15. MODULE 15 — GAS TURBINE ENGINE

Category A: 60 multi-choice and 0 essay questions. Time allowed 75 minutes.

Category B1: 92 multi-choice and 0 essay questions. Time allowed 115 minutes.

2.16. MODULE 16 — PISTON ENGINE

Category A: 52 multi-choice and 0 essay questions. Time allowed 65 minutes.

Category B1: 72 multi-choice and 0 essay questions. Time allowed 90 minutes.

Category B3: 68 multi-choice and 0 essay questions. Time allowed 85 minutes.

2.17. MODULE 17A — PROPELLER

Category A: 20 multi-choice and 0 essay questions. Time allowed 25 minutes. Category B1: 32 multi-choice and 0 essay questions. Time allowed 40 minutes.

MODULE 17B — PROPELLER

Category B3: 28 multi-choice and 0 essay questions. Time allowed 35 minutes.

# IS 2.8.3.2 SKILL TEST FOR THE FOO LICENSE

- (a) The skill test for the FOO license shall test the applicant's knowledge and performance in at least the following areas of operation:
  - (1) Flight planning/dispatch release, including the applicants' knowledge and performance of the following tasks:
    - (i) Regulatory requirements;
    - (ii) Meteorology;
    - (iii) Weather observations, analysis, and forecasts;
    - (iv) Weather related hazards;
    - (v) Aircraft systems, performance, and limitations;
    - (vi) Navigation and aircraft navigation systems;
    - (vii) Practical dispatch applications;
    - (viii) Manuals, handbooks and other written guidance.
  - (2) Preflight, takeoff, and departure, including the applicant's knowledge and performance of the following tasks:
    - (i) Air traffic control procedures;
    - (ii) Aerodrome, crew, and company procedures.
  - (3) In-flight procedures, including the applicant's knowledge and performance of the following tasks:
    - (i) Routing, re-routing, and flight plan filing;
    - (ii) En route communication procedures and requirements.
  - (4) Arrival, approach, and landing procedures, including the applicant's knowledge and performance of the following task:
    - (i) Air traffic control and air navigation procedures.
- (5) Post flight procedures, including the applicant's knowledge and performance of the following tasks:
  - (i) Communication procedures and requirements;
  - (ii) Trip records.
- (6) Abnormal and emergency procedures, including the applicant's knowledge and performance of the following task:
  - (i) Abnormal and emergency procedures.
- IS 2.10.1.4 RESERVED
- IS 2.10.1.5 RESERVED
- IS 2.10.1.6 RESERVED

### IS 2.11.1.3 AVIATION MEDICAL EXAMINERS

- (a) Basic training in aviation medicine for AMEs shall include at least the following:
  - (1) Basic training in aviation medicine;
  - (2) Physics of atmosphere and space;
  - (3) Basic aeronautical knowledge;
  - (4) Aviation Physiology;
  - (5) Opthalmology;
  - (6) Otorinolaryngology;
  - (7) Cardiology and general medicine;
  - (8) Neurology;
  - (9) Psychiatry in aviation medicine;
  - (10) Psychology;
  - (11) Dentistry;
  - (12) Accidents, Escape and Survival;
  - (13) Legislation, rules and regulations;
  - (14) Air evacuation;
  - (15) Medicine and flying.

- (b) Advanced training in aviation medicine for AMEs shall include the following:
  - (1) Pilot working environment;
  - (2) Aerospace physiology;
  - (3) Opthalmology;
  - (4) Otorinolaryngology;
  - (5) Cardiology and general medicine;
  - (6) Neurology/psychiatry;
  - (7) Human factors in aviation;
  - (8) Tropical medicine;
  - (9) Hygiene;
  - (10) Space medicine.

### IS 2.11.1.8 MEDICAL CERTIFICATE\*

- (a) The following details shall appear on the medical certificate:
  - (1) Name of State
  - (2) Medical certificate number
  - (3) Name of holder in full
  - (4) Date of birth of holder
  - (5) Address of holder
  - (6) Nationality of holder
  - (7) Signature of holder;
  - (8) Medical certificate Class 1, 2, or 3
  - (9) Date of issue
  - (10) Validity
  - (11) Limitations
  - (12) Issuing Authority
  - (13) Signature of Issuing Authority
  - (14) Examiner/CAA staff signature
  - (15) Examiner/CAA staff name (printed)
  - (16) Examiner's authorization number

(17) Date of examination and State of examination

Initial Medical Examination		
Date State		
Date (YDM) of:	Last	Next
Extended Medical Examination		
Medical (General) Examination		
Electrocardiogram		
Audiogram		

\*Note: The SMCAA approved medical application form and medical certificate is obtainable at the offices of the SMCAA appointed aviation medical examiners.

### **APPLICATION FORMS FOR ATC LICENSE**



## Sint Maarten Civil Aviation Authority

Ministry of Tourism, Economic Affairs, Traffic and Telecommunication



#### APPLICATION FOR THE ISSUANCE OF ATC LICENSE

Personal Particulars:		
1.	Surname:	
Christia	in names:	
	(Block letters)	
2.	Address:	
3.	Nationality	
4.	Place of Birth:	
5.	Date of Birth:	
6.	Telephone No:	
7.	E-mail Address:	
Professional Particulars:		
8.	English Language Proficiency Level:date:	

9.	Validity of Medical Certification: From	То
10.	Date of Examination:	
11.	Name of Examiners: 1)	2)
12.	3)	4)
Two recent passport photos I Performance Evaluation Form I Medical evaluation I		
Reaso	n: First Issuance I Re-Issuance I Lost/Dama	aged/Stolen 🛛
(for stolen include police report)		
Date:		Date:
Applica	ant's Signature:	Organization's Signature:
Sr Modesta rd # 12, Simpson Bay   Sint Maarten   T. (1-721) 545-2024		



### Sint Maarten Civil Aviation Authority

Ministry of Tourism, Economic Affairs, Traffic and Telecommunication



# APPLICATION FOR THE EXTENSION OF ATC LICENSE

#### **Personal Particulars:**

1.	Surname:
	Christian names:
2.	(Block letters)
3.	Nationality
4.	Place of Birth:
5.	Date of Birth:
6.	Telephone No:
7.	E-mail Address:

### **Professional Particulars:**

8.	License No:	
9.	Date of Expiry of License:	
10.	The Last date of Medical Examination:	
11.	English Language Proficiency Level:	date:
12.	Rating:	
Perforr	mance Evaluation Form I Medical	evaluation D
Date:		Date:
Applica	ant's Signature:	Organization's Signature:

Sr Modesta rd # 12, Simpson Bay | Sint Maarten | T. (1-721) 545-2024



## Sint Maarten Civil Aviation Authority

Ministry of Tourism, Economic Affairs, Traffic and Telecommunication



# APPLICATION FOR THE RENEWAL OF ATC LICENSE

### **Personal Particulars:**

1.	Surname:
	Christian names:
2.	Address:
3.	Nationality
4.	Place of Birth:
5.	Date of Birth:
6.	Telephone No:
7.	E-mail Address:

#### **Professional Particulars:**

IS 2-294

Sr Modesta rd # 12 Simpson Bay   Sint Maarten   T (1-721) 545-2024		
Applica	ants' Signature:	Organizations' Signature:
Date:	I	Date:
Two re	ecent passport photos I Performance Ev	aluation Form I Medical evaluation I
12.	Rating:	
11.	English Language Proficiency Level:	date:
10.	The Last date of Medical Examination:	
9.	Date of Expiry of License:	
8.	License No:	

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