



Advisory Circular

AC65-7.1

Air Traffic Service Personnel Licences and Ratings— Revision 2
Air Traffic Controller Ratings—Aerodrome Control Rating 11 May 2016

General

Civil Aviation Authority Advisory Circulars contain information about standards, practices, and procedures that the Director has found to be an **Acceptable Means of Compliance (AMC)** with the associated rule.

AMC is not intended to be the only means of compliance with a rule, and consideration will be given to other methods of compliance that may be presented to the Director. When new standards, practices, or procedures are found to be acceptable they will be added to the appropriate Advisory Circular.

An Advisory Circular may also include Guidance Material (GM) to facilitate compliance with the rule requirements. Guidance material must not be regarded as an acceptable means of compliance.

Purpose

This Advisory Circular provides guidance to facilitate compliance with the requirements for a Flight Radiotelephone Operator rating.

This material is intended for applicants for air traffic service personnel licences and ratings, holders of air traffic service personnel licences and ratings, air traffic service instructors, air traffic service examiners, training organisations, and air traffic service organisations.

Related Rules

This Advisory Circular relates specifically to Part-65 Air Traffic Service Personnel Licences and Ratings.

Change Notice

Subject to “Memorandum for Technical Cooperation” between the CAA of Mongolia and New Zealand on mutual cooperation in implementation of Assembly Resolution A29-3: Global Rule Harmonization, 29th ICAO Assembly, 1992, which urges States to promote global harmonization of national rules, dated 6th of May, 1999, Mongolian Civil Aviation Safety Regulation has been reconciled to the Civil Aviation Regulation of New Zealand.

Amendment 164 of Annex 1 to the Chicago Convention on International Civil Aviation urges flight crew members, ATC personnel and aircraft maintenance engineers to comply with the language proficiency requirements; and

Under Article 14 of the Civil Aviation Law of Mongolia 1999, “Use of foreign language in civil aviation” the AC has been released in English version only, in order to prevent any mistranslation and misuse of the aviation safety related documents.

This AC 65-7.1 was developed based on NZ AC65-7.1 revision 2 dated on 07 February 2013.

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Introduction

Part-65 prescribes rules governing the issue of air traffic service licences and ratings, the conditions under which those licences and ratings are necessary, and the privileges and limitations of those licences and ratings. The Part introduced changes that included Area Control Automatic Dependent Surveillance Ratings, Instructor Ratings, Examiner Ratings, and Flight Service Operator Licences.

This Advisory Circular and the associated series of Advisory Circulars, one for each Part-65 Subpart, and one for each rating where more than one rating is contained within a Subpart, support these rules.

Advisory circular intent and process

Guidance on how to comply with Part-65 Subpart G 65.301(1)(i) is contained within this Advisory Circular (AC) Air Traffic Service Personnel Licences and Ratings – Air Traffic Controller Ratings – Aerodrome Control Rating.

MCAA is actively managing the development of syllabuses into specific objective format. This format specifies exactly what has to be covered, and to what standard, so that no matter who studies, who instructs, and who assesses, all are working to exactly the same standards.

Subpart G—Air Traffic Controller Ratings—Aerodrome Control Rating

65.301 Applicability

Subpart G prescribes the rules governing the issue and validation of aerodrome control ratings and the privileges and limitations of those ratings.

65.303 Eligibility requirements

Part-65.303 requires an applicant for an aerodrome control rating to have satisfactorily completed a training course and to have passed examinations relevant to the rating and validation, in aerodrome layout; physical characteristics and visual aids, airspace structure; applicable rules, procedures and source of information; air navigation facilities; air traffic control equipment and use; terrain and prominent landmarks; characteristics of air traffic; weather phenomena; and emergency search and rescue plans. Refer to subparagraphs (a)(2)(i) and (4) of the rule.

Successful assessment based on the syllabus content given in Appendix A of this advisory circular would meet this requirement.

APPENDIX A—Subject No 103—Aerodrome Control Rating

Syllabus

Each subject has been given a subject number and each topic within that subject a topic number. These reference numbers may be used on 'knowledge deficiency reports' and will provide valuable feed back to the examination candidate.

Sub Topic Syllabus Item

Air Traffic Services and Airspace Management

103.2 General

- 103.2.2 Explain the objectives of Air Traffic Services.
- 103.2.4 State the categories Air Traffic Services are divided into.

103.4 Air Traffic Control Service

- 103.4.2 Define Air Traffic Control Service.
- 103.4.4 Explain the responsibility for the provision of an Air Traffic Control Service.
- 103.4.6 Define Aerodrome Control Service.
- 103.4.8 Describe the responsibilities and directives of an Aerodrome Controller.
- 103.4.10 Describe the divisions of responsibility between Aerodrome and Approach Control.
- 103.4.12 Explain the requirements for a visual watch by the Aerodrome Controller.
- 103.4.14 Explain what is meant by the term 'vicinity of an aerodrome'.
- 103.4.16 Describe an Aerodrome Controller's responsibility in the vicinity of an aerodrome.
- 103.4.18 Describe an Aerodrome Controller's responsibility beyond the vicinity of an aerodrome.

- 103.6 Flight Information Service**
- 103.6.2 Define Flight Information Service.
- 103.6.4 Describe the scope of the Flight Information Service.
- 103.6.6 Explain the responsibility for the provision of the Flight Information Service.
- 103.6.8 Describe the information passed to a flight on first contact.
- 103.6.10 Define traffic information.
- 103.6.12 State when traffic information is passed.
- 103.6.14 Describe the requirements for the issuance of traffic information in the provision of Aerodrome Control.
- 103.6.16 Explain the ATIS procedures.
- 103.6.18 Describe traffic avoidance advice, including relevant information to be passed.
- 103.6.20 Describe the controller's actions and requirements on receiving pilot reports on significant weather.
- 103.6.22 Describe the procedures to follow when Notification of Specified Criteria Affecting Aerodrome Serviceability is required.
- 103.6.24 List the information to be included in Aerodrome Conditions advice to aircraft.
- 103.6.26 Describe procedures for dissemination of NOTAM information and SIGMET reports, including the compilation of such reports.
- 103.6.28 Describe controller's actions on receiving pilot reports of weather phenomena such as wind shear and turbulence.
- 103.6.30 Describe process for advising subsequent traffic on significant weather reports.

103.8 Alerting Service

- 103.8.2 Define Alerting Service.
- 103.8.4 Describe the scope of the Alerting Service.
- 103.8.6 Explain the responsibility for the provision of the Alerting Service.
- 103.8.8 Explain the actions taken in the provision of the Alerting Service.
- 103.8.10 Explain the Alerting Service Emergency Phases.
- 103.8.12 Derive from an in-flight emergency response checklist, the controller's actions in the event of an in-flight emergency.
- 103.8.14 Explain the initial checks carried out to confirm the operational status of an aircraft.
- 103.8.16 Define SARTIME.
- 103.8.18 Describe the process for RCC/Police/MCAA notification.

103.10 Aerodrome Emergencies

- 103.10.2 Describe the purpose of the Aerodrome Emergency Plan.
- 103.10.4 Describe the Aerodrome Emergency Phases and the procedures for each of these.
- 103.10.6 Explain in general terms the use of references available during emergencies, including telephone lists, forms, checklists and grid maps.
- 103.10.8 Describe the emergency alerting equipment and communication facilities.
- 103.10.10 Describe the documents stating actions during and after an emergency event.
- 103.10.12 Describe the actions taken in the following situations:
 - (a) MAYDAY call from pilot;
 - (b) PAN call from pilot;

(c) notification of emergency from another source.

103.10.14 Describe the actions for closing watch with regards to alerting services provided to aerodrome traffic.

103.10.16 Describe the procedure for isolating an aircraft believed to be the subject of unlawful interference.

103.12 Airspace Management

103.12.2 Describe the requirements for managing and prioritising workload in the provision of Air Traffic Services.

103.12.4 Explain traffic priorities within controlled airspace.

103.12.6 Describe the procedures to follow when it becomes apparent air traffic demand will exceed the available capacity of the ATC system.

103.12.8 Define Air Traffic Management (ATM).

103.12.10 Define Air Traffic Flow Management (ATFM).

103.12.12 Explain the tools used for implementing ATFM.

103.14 Performance Based Navigation

103.14.2 Describe the components of an Area Navigation System.

103.14.4 Define the following terms:

(a) Performance Based Navigation (PBN);

(b) RNAV;

(c) RNP;

(d) RNP AR.

103.14.6 Explain the use and limitations of satellite based GNSS.

103.14.8 Explain values used in association with RNP (and RNAV).

103.14.10 Explain the following procedures:

- (a) RNAV SIDs;
- (b) RNAV STARs,
- (c) RNAV approaches;
- (d) RNP AR approaches and departures;
- (e) flight plan requirements for RNAV.

Co-ordination, Clearances and Instructions

103.16 ATS Movement and Control Messages

- 103.16.2 Describe Air Traffic Service messages.
- 103.16.4 Describe the methods of message exchange for ATS messages.
- 103.16.6 Describe the requirements for exchange of movement data for non-controlled flights.
- 103.16.8 Explain the movement and control messages for automatic distribution of flight plan data within the Flight Data Processor (FDP).

103.18 Flight Planning

- 103.18.2 Explain in general terms the requirements to follow on receiving flight plans, including briefing provision.
- 103.18.4 Explain the Flight Data Processing System (FDPS) for filing and creation of flight plans.
- 103.18.6 Explain the process for dissemination of flight plans.
- 103.18.8 Explain the flight plan requirements for:
 - (a) flight plan route field;
 - (b) mixed flight rules;
 - (c) use of full registration;
 - (d) aircraft types;

- (e) flight plan other field.
- 103.18.10 Explain the flight plan process for short term flight plans, including occasions used.
- 103.18.12 Explain flight plan management procedures for:
- (a) flights cancelling IFR and proceeding VFR;
 - (b) flights cancelling VFR and proceeding IFR.
- 103.18.14 Describe the requirement for termination of flight plan, including Air Traffic Controller and pilot responsibilities.

103.20 Co-ordination Tools

- 103.20.2 Explain the automatic distribution of flight plan data within the Flight Data Processor (FDP).
- 103.20.4 State the various methods of coordination.
- 103.20.6 Explain the limitations of automatic exchange of ATS data in coordination.
- 103.20.8 Describe action to be taken when Flight Data Processor (FDP) cannot meet coordination time criteria.
- 103.20.10 Identify:
- (a) when an approval request is required; and
 - (b) the associated phraseologies.

103.22 Co-ordination Procedures

- 103.22.2 Describe the general co-ordination criteria for the provision of Air Traffic Services, including:
- (a) information about which agreement must be reached; and
 - (b) when co-ordination is required.
- 103.22.4 Explain the methods for confirmation of coordination.

- 103.22.6 State when a read back of coordination is mandatory.
- 103.22.8 Describe the procedures relating to estimate messages, including:
- (a) occasions when estimates shall be passed;
 - (b) explanation of an information estimate;
 - (c) requirements for the use of estimate messages;
 - (d) elements of an estimate message, including for a departing aircraft;
 - (e) responsibilities of a controller when accepting an estimate message;
 - (f) standard phraseologies used.
- 103.22.10 Describe the Aerodrome Control coordination requirements with adjacent approach sectors.
- 103.22.12 Describe the co-ordination procedures for all flights planned to operating within UB FIR.
- 103.22.14 Describe the co-ordination and flight planning procedures to be followed for military operations.

103.24 Revisions

- 103.24.2 Identify the requirements for revisions to estimates and Current Flight Plan (CPL) messages in the following circumstances:
- (a) changes of routing, including appropriate phraseology;
 - (b) revisions to ETA;
 - (c) revisions to level;
 - (d) revisions to SSR code.
- 10.24.4 State the standard phraseologies for revisions.

103.26 Transfer of Control and Radio Guard

- 103.26.2 Describe the procedures associated with transfer of control, including:

- (a) elements of a verbal transfer of control message and response;
- (b) accepting controller's responsibility;
- (c) separation responsibility- 'Your Separation';
- (d) early release requirements;
- (e) phraseologies.

103.26.4 Describe the following procedures associated with transfer of radio guard:

- (a) standard RTF contact points;
- (b) accepting controller responsibility.

103.28 ATC Clearances

103.28.2 Describe the general principles of an ATC Clearance, including:

- (a) validity;
- (b) who requires a Clearance;
- (c) when it can be denied or withheld;
- (d) Clearance issue, including relay through another agency.

103.28.4 Describe the elements of an ATC Clearance.

103.28.6 List the elements of an ATC clearance that must be read back in full by a pilot.

103.28.8 Describe the requirements for issuing clearances to IFR flights to enter or leave controlled airspace.

103.28.10 List the objectives for instructions contained in an ATC Clearance for an IFR flight.

103.28.12 Describe the Flight Data Processor (FDP) requirements for an ATC Clearance in the following cases:

- (a) no coordination required in accordance with operational documents;

- (b) coordination required in accordance with operational documents;
 - (c) procedures when aircraft request a Block Level prior to departure;
 - (d) action for this in the event of a Flight Data Processor (FDP) failure.
- 103.28.14 Describe the ATS services a clearance to a VFR flight will provide.
- 103.28.16 List the phrases to be used to authorise an aircraft to operate in controlled airspace.
- 103.28.18 Explain the term Clearance Limit.
- 103.28.20 Describe procedures to follow in the event of unavailability of route and/or cruise level elements of an ATC clearance, including the phraseologies to be used.
- 103.28.22 Describe the procedures associated with route instructions.
- 103.28.24 Describe the procedures associated with level instructions and identify appropriate phraseologies.
- 103.28.26 State the procedures for updating the Current Flight Plan (CPL) level on the flight plan for an aircraft:
- (a) prior to departure;
 - (b) in the climb;
 - (c) in the cruise;
 - (d) in the descent;
 - (e) VFR aircraft.
- 103.28.28 Define IFR, MFA, MSA, MRA and MEA, MDA and DA.
- 103.28.30 Describe the procedure for SVFR flights.
- 103.28.32 Describe procedures associated with departure and diversionary climb instructions and identify relevant phraseologies.
- 103.28.34 Explain Oceanic Transitions.

- 103.28.36 Describe the separation and reporting instructions.
- 103.28.38 Demonstrate examples for the following:
- (a) basic clearance formats;
 - (b) entering controlled airspace;
 - (c) leaving controlled airspace.
- 103.28.40 Describe the procedures for the assignment of cruising levels to IFR flights, including RVSM requirements.
- 103.28.42 Explain IFR altimeter setting requirements.
- 103.28.44 Describe the separation instructions issued when applying vertical separation.
- 103.28.46 State the requirements and phraseologies for issuing level instructions to VFR flights.
- 103.28.48 List the phraseologies for SSR Code allocation and frequency change instructions.
- 103.28.50 State the different internal ATC release instructions issued to departing aircraft, including delivery instructions.
- 103.28.52 Describe the phraseologies for advising Clearance delay.

Aerodrome Control

103.30 Aerodrome and Control Zone Environment

- 103.30.2 Explain in general terms the Letter of Agreements with the Aerodrome Licensee and Operators as appropriate.
- 103.30.4 State the location and purpose of the Aerodrome Reference Point (ARP).
- 103.30.6 Define the following:
- (a) Aerodrome Reference Point (ARP);
 - (b) manoeuvring area;

- (c) TORA;
- (d) TODA;
- (e) LDA;
- (f) accelerate-stop distance;
- (g) holding point.

103.30.8 Derive from appropriate publications the location of the following:

- (a) aerodrome elevation;
- (b) boundaries of aerodrome.

103.30.10 State the runway directions and any restrictions on use.

103.30.12 Describe the purpose of Stopways and Clearways.

103.30.14 Describe the surface material and dimensions of the Runways, Stopways and Clearways.

103.30.16 Explain the type and purpose of runway markings.

103.30.18 Explain the restrictions and procedures associated with Taxiways including physical dimensions and markings.

103.30.20 State the pavement strength classification.

103.30.22 Explain the method of marking unserviceable areas.

103.30.24 Describe the aerodrome lighting system, including:

- (a) runway;
- (b) taxiway;
- (c) approach;
- (d) apron;
- (e) aerodrome beacon;

- (f) displaced threshold and reduced length operations;
- (g) LVO lighting;
- (h) flood lighting;
- (i) hazard;
- (j) obstructions;
- (k) beacons;
- (l) VASI;
- (m) PAPI;
- (n) method of control;
- (o) inspection;
- (p) reporting of unserviceability's.

103.30.26 Describe the requirements for aerodrome lighting including:

- (a) specified time of operation;
- (b) intensity setting by day and night;
- (c) intensity variation when requested by pilots.

103.30.28 Explain in general terms the layout of the aerodrome, including where applicable:

- (a) location of aerodrome users;
- (b) windsocks;
- (c) aircraft parking;
- (d) RVR meters;
- (e) Rescue Fire Service (RFS) and associated equipment;

- (f) emergency staging and dispersal areas;
 - (g) apron roadway(s);
 - (h) restricted zones;
 - (i) engine run bay ;
 - (j) VOR check points.
- 103.30.30 Describe the performance characteristics of common aircraft operating within the Control Zone, including:
- (a) rates of climb/descent and maximum/minimum speeds;
 - (b) deterioration/variation of weather effecting aircraft operations and separations;
 - (c) IFR training;
 - (d) local operators, designators and procedures.
- 103.30.32 Describe the geography and general weather of the Aerodrome Control environment, including:
- (a) topography and local weather patterns;
 - (b) locations of airfields in the vicinity and directions of runways;
 - (c) rivers, towns and prominent features.
- 103.30.34 Define the area of responsibility for the Aerodrome Control Service.
- 103.30.36 Derive from appropriate maps and charts relevant information, including:
- (a) Control Zone dimensions and airspace classification;
 - (b) Control Zone transit lanes;
 - (c) adjacent controlled and uncontrolled airspace and airspace classification;
 - (d) General Aviation Areas and Special Use Airspace, Danger and Restricted Areas;

- (e) Visual Reporting Points (VRP) and Navigation Aid (NAVAID) location;
 - (f) areas geographically separated from instrument arrival and departure tracks;
 - (g) frequencies and aerial location.
- 103.30.38 Describe the aerodrome traffic circuit, including standard altitude, direction and provisos for the use of non-standard circuits.
- 103.30.40 Describe the arrival procedures for IFR and VFR aircraft.
- 103.30.42 Describe the departure procedures for IFR and VFR aircraft.
- 103.30.44 Explain the process to follow for runway changes.
- 103.30.46 Describe factors taken into consideration when selecting runway in use, including procedures for use of different runways.
- 103.30.48 State the runway designator phraseology.
- 103.32 Aerodrome Control Separations**
- 103.32.2 Describe the considerations for the application of runway separation including mixing of powered and unpowered aircraft on the same runway.
- 103.32.4 State the requirements to be met for the application of reduced runway separation including touch and go/stop and go landings.
- 103.32.6 State the runways separations for the operation of a single runway for:
- (a) take off vs. take off;
 - (b) landing vs. landing;
 - (c) landing vs. take off.
- 103.32.8 State the requirements for parallel runway operations, for the following:
- (a) simultaneous same direction operations;
 - (b) non-simultaneous same directio operations ;

- (c) other parallel operations.
- 103.32.10 State the requirements for crossing runway operation for the following:
- (a) take off;
 - (b) landing ;
 - (c) non intersecting runways with crossing flight paths.
- 103.32.12 State the requirements for the operation of runways separated by less than the holding distance for the respective aircraft.
- 103.32.16 State the application of separation within a Control Zone when only Aerodrome Control is provided.
- 103.32.18 Describe the requirements for the provision of separation and methods applied.
- 103.32.20 State the separation for successive IFR departures where tracks diverge after take-off.
- 103.32.22 Explain the scope for the provision of separation.
- 103.32.24 Describe the provision of separation to military aircraft.
- 103.32.26 State when separation can be reduced or increased.
- 103.32.28 Describe the actions to be taken in the event of a loss of separation.
- 103.32.30 State the elements of Essential Traffic Information.
- 103.32.32 Explain Visual Separation.
- 103.32.34 Define the terms used in the provision of Visual Separation.
- 103.32.36 List the requirements before clearing an IFR flight to maintain own separation in VMC, including pilot responsibilities.
- 103.32.38 Explain the requirements for the application of Visual Separation within the vicinity of an aerodrome.

- 103.32.40 Explain the requirements for the application of Composite Visual Separation.
- 103.32.42 Describe pilot responsibilities when ATC is applying Visual Separation.
- 103.32.44 Describe the information given when requiring a pilot to sight another aircraft for the application of Visual Separation.
- 103.32.46 State the Vertical Separation minima.
- 103.32.48 State the separation requirements for SVFR flights.
- 103.32.50 Describe the requirements to be met prior to clearing an aircraft to a level when the aircraft occupying that level reports vacating.
- 103.32.52 Describe Geographical Separation, including:
- (a) methods of application;
 - (b) restrictions on use.
- 103.32.54 Describe the requirements, where delegated by the adjacent approach sector, for Missed Approach Protection.
- 103.32.56 State the vertical and horizontal separations from SUA and GAA, including exceptions.
- 103.32.58 State the separation requirements from parachute operations.
- 103.32.60 State the separation requirements from aircraft fuel dumping.
- 103.32.62 State the separation requirements from aerobatics in controlled airspace.
- 103.32.64 Explain wake turbulence and how it affects aircraft.
- 103.32.66 Describe the wake turbulence categories.
- 103.32.68 State the time based wake turbulence separations.
- 103.32.70 Explain:
- (a) the considerations when there is a possibility of wake turbulence, jet blast, propeller slipstream or rotor downwash; and

- (b) the phraseology for issuing warnings of those listed in (a) above .

103.32.72 Describe requirement for Code F aircraft operations.

103.34 Aerodrome Operations

103.34.2 Describe the information to be passed to aerodrome traffic, including:

- (a) start-up advice;
- (b) local traffic information.

103.34.4 Describe the methods and instructions an aerodrome controller can use to join arriving aircraft, including circuit joining.

103.34.6 Describe the procedures to be followed prior to issuing a clearance for an approach which will conflict with the circuit in use.

103.34.8 Describe the process for issuing information and/or instructions to aircraft on circling approaches to achieve circuit integration.

103.34.10 Describe the methods and instructions an aerodrome controller can use to achieve sequencing of aircraft in the circuit.

103.34.12 Describe the manoeuvres associated with establishing a landing sequence, and considerations taken into account when assessing pilot's ability to comply.

103.34.14 List the elements of a taxi clearance and describe various taxi routes aircraft may be instructed to follow, including phraseologies.

103.34.16 Describe the procedures used for the control of helicopter operations.

103.34.18 Describe the methods of control of circuit traffic at a controlled aerodrome with reference to departing aircraft, including;

- (a) procedures and provisos associated with "line up" for departing aircraft;
- (b) conditional line up clearances;
- (c) contents of a take-off clearance;

- (d) provisos with qualified take off clearances;
 - (e) phraseologies to expedite and cancel take off clearances.
- 103.34.20 Describe the methods of control of circuit traffic at a controlled aerodrome with reference to landing aircraft, including:
- (a) when a landing clearance shall be issued;
 - (b) the contents of a landing clearance in order;
 - (c) provisos for the use of a qualified landing clearance;
 - (d) when taxi instructions should be issued;
 - (e) procedures in the event of a go around.
- 103.34.22 Explain what is meant by patterned and sequenced traffic configuration.
- 103.34.24 Describe methods used to achieve patterned and sequenced traffic configuration.
- 103.34.26 Explain the requirements for segregation and circuit integration.
- 103.34.28 Describe the procedures and reporting requirements for:
- (a) standard overhead join; and
 - (b) buzz and break procedures.
- 103.34.30 Describe the procedures for handling Missed Approaches.
- 103.34.32 Describe the procedures where applicable for Tower Initiated Departures.
- 103.34.34 Describe the Noise Abatement procedures, where applicable.
- 103.34.36 Describe any procedures for handling of Low Visibility Operations, including coordination with adjacent approach sector.
- 103.34.38 State the requirements for protection of ILS critical areas, including inadvertent incursions.
- 103.34.40 Explain the term 'Go/No Go Area' including where depicted.

- 103.34.42 Describe the recommended techniques used for scanning in the provision of Aerodrome Control.
- 103.34.44 State the requirements and standard phraseologies for simulated emergency and training manoeuvres.
- 103.34.46 Describe the procedures and light signals used for NORDO aircraft.
- 103.34.48 Describe the procedures associated with the control of vehicles and pedestrians on the manoeuvring area at controlled aerodromes including potential hazards and phraseologies.
- 103.34.50 Describe light signals to be used in the event of a communication failure with personnel or a vehicle.
- 103.34.52 Describe the responsibility for runway inspections including their frequency and reporting requirements.
- 103.34.54 Describe the runway and taxiway holding distance criteria.
- 103.34.56 Describe the criteria for closing a runway due to close proximity of vehicles or other obstructions.
- 103.34.58 Describe the work zone at the aerodrome.
- 103.34.60 State the reporting requirements for IFR and VFR flights within the control zone.
- 103.34.62 Describe procedures associated with special flight handling, such as calibration, photography, surveying, search and rescue, simulated emergencies, training flights, etc.
- 103.34.64 State what is meant by 'No Ops Area' and identify where you would locate this information.
- 103.34.66 Describe the procedures when unauthorised operations are sighted or reported to the aerodrome controller.
- 103.34.68 Describe the procedures to be followed for military operations.
- 103.34.70 Describe the process for handling military traffic to and from the patrol area, including emergencies.

- 103.34.72 State the airspace where glider operations require a clearance to enter.
- 103.34.74 State the requirements for glider flights in IMC.
- 103.34.76 State the requirements for parachute descents within controlled airspace.
- 103.34.78 Explain the procedures required for entry of balloons, rockets, etc. into controlled airspace.
- 103.34.80 Describe the process to follow in the event unauthorised operations are observed.
- 103.34.82 Explain the procedures required for operation of moored balloons and kites, model aircraft and gyro gliders and parasail (including kite surfers).
- 103.34.84 Describe the process when an abnormal aircraft configuration or condition is observed or reported.
- 103.34.86 Describe the requirements for passing information on aircraft status.
- 103.34.88 State the aerodrome controller's requirements for requests to carry out simulated emergency and training manoeuvres, including standard phraseologies.
- 103.36 Meteorology**
- 103.36.2 List the phrases available to describe aerodrome surface conditions.
- 103.36.4 State the VFR met minima within Control Zones.
- 103.36.6 State the SVFR met minima within Control Zones.
- 103.36.8 Describe the local cloud and visibility check points.
- 103.36.10 Describe the measurement and reporting procedures for Runway Visual Range, including appropriate phraseology.
- 103.36.12 State the requirements for nominating a visual approach as the preferred IFR approach.
- 103.36.14 Describe the additional met reports provided:

- (a) for aircraft prior to take-off and landing;
 - (b) for departing aircraft.
- 103.36.16 State the meteorological reports to be passed by aerodrome control to arriving VFR flights.
- 103.36.18 State the weather element changes required for updating the take-off and/or landing reports.
- 103.36.20 State when there is a requirement to pass significant changes and variation in take-off and landing reports.
- 103.38 Tower Position Operation**
- 103.38.2 Describe the requirements for an adequate pre-duty briefing.
- 103.38.4 Describe the procedures for opening or taking over a watch.
- 103.38.6 Describe the procedures for closing or handing over watch, including any sector specific handover techniques.
- 103.38.8 Describe the tower's equipment check requirements and use of ATS position log strip.
- 103.38.10 Describe the adjacent sectors off watch procedures.
- 103.38.12 Explain the towers flight progress system, including where applicable use of E-strips, paper strips and data recording on strips.
- 103.38.14 Describe the flight progress board display of meteorological and NOTAM information.
- 103.38.16 Describe the tower and position specific responsibilities including the operation of different positions within the tower.
- 103.38.18 Explain the procedures for determining hours of service including how they are promulgated and extension to hours of service.
- 103.38.20 Describe the overall requirements for staffing at ATS operating positions.
- 103.38.22 Explain the use of the ATS Log Book.

- 103.38.24 State where you would locate information relating to the acquisition, retention, dissemination, relinquishment and release of records by ATS units.
- 103.38.26 Describe the Personnel Licensing requirements for the Aerodrome Control Rating including the training plan objectives.
- 103.38.28 Explain the feedback/ assessment mechanisms available for a trainee within the training plan for the Aerodrome Control Rating.
- 103.38.30 Describe the medical fitness requirements for exercising an Aerodrome Control Rating.
- 103.38.32 Describe the recent experience requirements for exercising an Aerodrome Control Rating.
- 103.38.34 Describe the requirements for ATS personal log books.

103.40 Emergencies

- 103.40.2 Describe the procedures for closure of an aerodrome, including where you would locate this information.
- 103.40.4 Explain actions taken by controllers in the event work place evacuation is required, including traffic recovery.
- 103.40.6 State where you would locate documentation for handling unusual/emergency situations, such as bomb threat and evacuation.
- 103.40.8 State where you would locate information on procedures and initial actions for handling Aviation Accidents and Incidents.

Equipment

103.42 ATS Equipment

- 103.42.2 Explain the working principles of PSR and SSR.
- 103.42.4 Explain the use of PSR/SSR in ATC.
- 103.42.6 Explain the link between PSR/SSR with automated ATC systems.

- 103.42.8 Explain in general terms the automated Flight Data Processor (FDP)/Radar Data Processor (RDP) systems.
- 103.42.10 Describe the information displayed, including radar symbols, on the Situation Display (SD).
- 103.42.12 Explain in general terms the function of each piece of equipment, including information displayed, available on the tower Controller Work Position (CWP).
- 103.42.14 Explain the working principles and use of MLAT in ATC.
- 103.42.16 Explain in general terms the equipment available to the tower controller, including where applicable:
- (a) VDF – including accuracy check and operating procedures;
 - (b) navigational aids, including monitoring facilities;
 - (c) met display unit, met coder;
 - (d) QNH pressure sources;
 - (e) aeronautical ground lights;
 - (f) vaisala;
 - (g) AFTN;
 - (h) standby radios;
 - (i) E-strips;
 - (j) strip printer;
 - (k) signal lamp;
 - (l) clock;
 - (m) cell phone and pager;
 - (n) remote camera operation;

- (o) gate allocation display;
- (p) multi-lateration display;
- (q) phones, PC and fax.

103.42.18 Describe the requirements for monitoring the status of equipment facilities.

103.44 Airborne Collision Avoidance System (ACAS)

103.44.2 Identify the meaning of acronyms associated with ACAS.

103.44.4 Describe how ACAS equipment operates.

103.44.6 Describe the actions taken by pilots and controllers in the event of a Traffic Advisory (TA) ACAS incident.

103.44.8 Describe the actions taken by pilots and controllers in the event of a Resolution Advisory (RA) ACAS incident.

103.44.10 Describe the procedures for the reporting of an ACAS event.

103.46 Radar in towers

103.46.2 Explain SSR code management.

103.46.4 Describe the procedures for handling non-transponder equipped aircraft in transponder mandatory controlled airspace.

103.46.6 State the policy for the use of radar in towers.

103.48 ATS Equipment Failure

103.48.2 Explain how to recognise system degradation or complete failure of ATS equipment, including but not limited to:

- (a) Flight Data Processor (FDP) / Radar Data Processor (RDP) systems;
- (b) navigation aids including monitoring facilities;
- (c) voice communication system;
- (d) main and standby power supply;

- (e) equipment on Controller Work Position (CWP);
- (f) met display unit;
- (g) QNH pressure sources;
- (h) aeronautical ground lights;
- (i) VDF – including accuracy check and operating procedure;
- (j) vaisala;
- (k) AFTN;
- (l) standby radios;
- (m) E-strips;
- (n) strip printer;
- (o) signal lamp;
- (p) clock;
- (q) cell phone and pager;
- (r) remote camera operation;
- (s) gate allocation display;
- (t) multi-lateration display;
- (u) phones, PC and fax.

103.48.4 Describe the procedures to be followed in the event of failure or partial failure of ATS equipment including the location of supporting documentation to the Operations Manual.