

## Appendix I Instrument rating written examination syllabuses

### Subject No 52 Air Law

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

Sub Topic	Syllabus Item
52.2	<b>Aviation Legislation</b>
52.2.2	Describe the requirements to hold an aviation document, as laid down in S7. CA Act 1990
52.2.4	Describe the criteria for the fit and proper person test, as laid down in S10. CA Act 1990
52.2.6	Describe the duties of the pilot-in-command, as laid down in S13. CA Act 1990
52.4	<b>Definitions</b>
	CAR Part 1(unless otherwise noted)
	State the definition of:
(a)	act;
(b)	aerodrome control service;
(c)	aerodrome operational area;
(d)	aerodrome traffic circuit;
(e)	aerodrome traffic zone (ATZ);
(f)	aeronautical information circular;
(g)	aeronautical information publications (AIP);
(h)	AIP supplement;
(i)	air traffic control (ATC) service;
(j)	air transport operation;
(k)	airworthiness certificate;
(l)	airworthy condition;
(m)	alternate aerodrome;
(n)	altitude;
(o)	approach control;
(p)	area control;
(q)	area navigation;

<b>Sub Topic</b>	<b>Syllabus Item</b>
	(r) ATC clearance;
	(s) ATC instruction;
	(t) AWIB service;
	(u) Category II precision approach procedure;
	(v) ceiling;
	(w) clearance limit;
	(x) command practice;
	(y) controlled airspace;
	(z) controlled flight;
	(aa) co-pilot;
	(bb) crew member;
	(cc) day;
	(dd) decision altitude (DA);
	(ee) decision height (DH);
	(ff) dual flight time;
	(gg) final reserve fuel;
	(hh) flight examiner;
	(ii) flight level;
	(jj) height;
	(kk) IFR flight;
	(ll) instrument approach procedure;
	(mm) instrument flight;
	(nn) instrument flight time;
	(oo) instrument meteorological conditions;
	(pp) instrument time;
	(qq) Mach number;
	(rr) minimum descent altitude (MDA);
	(ss) minimum descent height (MDH);
	(tt) minimum safe altitude (MSA); (AIP GEN)

<b>Sub Topic</b>	<b>Syllabus Item</b>
	(uu) night;
	(vv) NOTAM;
	(ww) pilot-in-command;
	(xx) precision approach procedure;
	(yy) pressure altitude;
	(zz) rating;
	(aaa) reporting point;
	(bbb) RNP performance;
	(ccc) runway visual range;
	(ddd) SARTIME;
	(eee) SEIFR passenger operation;
	(fff) threshold; (CAR 121.3)
	(ggg) VFR flight;
	(hhh) visibility;
	(iii) visual meteorological conditions.

52.6

**Abbreviations**

CAR Part 1 (unless otherwise noted)

State the meaning of the following abbreviations:

- (a) ADF;
- (b) AGL;
- (c) AIREP; (AIP GEN)
- (d) AMSL;
- (e) DME;
- (f) GNSS; (CAR 19.203)
- (g) ILS;
- (h) QFE;
- (i) QNH;
- (j) RVSM;
- (k) VOR.

<b>Sub Topic</b>	<b>Syllabus Item</b>
	<b>Personnel Licensing</b>
52.8	<b>Requirements for Licences and Ratings</b>
52.8.2	State the requirements for holding a pilot's licence. CAR 61
52.8.4	State the requirements for holding an instrument rating. CAR 61
52.8.6	State the requirements for a pilot-in-command to hold a type rating on the type of aircraft being flown. CAR 61
52.8.8	State the requirements for entering flight details into a pilot's logbook. CAR 61
52.8.10	State the licence and rating requirements for acting as a safety pilot during simulated instrument flight. CAR 91
52.10	<b>Eligibility, Privileges and Limitations</b>
52.10.2	Describe the allowance for a person who does not hold a current pilot's licence to fly dual with an instructor. CAR 61
52.10.4	State the eligibility requirements for the issue of an instrument rating. CAR 61
52.10.6	State the privileges of holding an instrument rating. CAR 61
52.10.8	State the limitations on the holder of an instrument rating. CAR 61
52.10.10	State the qualification requirements for carrying out various types of instrument approach. CAR 61
52.12	<b>Currency</b>
52.12.2	State the currency requirements of a pilot who is the holder of an instrument rating CAR 61.
52.12.4	State the currency requirements for carrying out an instrument approach. CAR 61
52.14	<b>Medical Requirements</b>
52.14.2	State the requirements for holding a medical certificate. CAR 61
52.14.4	State the requirements on a person applying for a medical certificate. CAR 67
52.14.6	State the requirements for maintaining medical fitness following the issue of a medical certificate. CAR 61
52.14.8	State the normal currency period of the Class 1 medical certificate for an CPL holder who is under the age of 40. CAR 67
52.14.10	State the normal currency period of the Class 1 medical certificate for an CPL holder who is 40 years of age or more on the date that the certificate is issued. CAR 67
52.14.12	State the extended currency period of the Class 1 medical certificate for an CPL holder who is 40 years of age or more. CAR 67
52.14.14	State the limitations to an extended currency period of the Class 1 medical certificate for an CPL holder who is 40 years of age or more. CAR 67

<b>Sub Topic</b>	<b>Syllabus Item</b>
	<b>Airworthiness of Aircraft and Aircraft Equipment</b>
	<b>Documentation</b>
52.16	
52.16.2	State the documents which must be carried in aircraft operated in New Zealand. CAR 91
52.18	<b>Aircraft Maintenance</b>
52.18.2	State the inspection period for radios. CAR 91
52.18.4	State the inspection period for altimeters. CAR 91
52.18.6	State the inspection period for transponders. CAR 91
52.18.8	State the inspection period for the ELT. CAR 91
52.20	<b>Instruments and Avionics</b>
52.20.2	State the minimum instrument requirements for an IFR flight. CAR 91
52.20.4	State the communications and navigation equipment requirements for an IFR flight. CAR 91
52.20.6	State the equipment requirements of aircraft operating in airspace where RVSM is applied by ATC. CAR 91
52.22	<b>Equipment</b>
52.22.2	State the equipment requirements for an IFR flight. CAR 91
52.22.4	State the requirements for indicating the time in flight. CAR 91
52.22.6	State the requirements for night flight. CAR 91
52.22.8	Explain the requirement for altitude alerting/assigned altitude indicating. CAR 91
52.22.10	State the requirements for an ELT. CAR 91
	<b>General Operating and Flight Rules</b>
52.24	<b>General Operating Requirements</b>
52.24.2	State the requirements for operating an aircraft in simulated instrument flight. CAR 91
52.24.4	State the requirements for carrying appropriate aeronautical publications and charts in flight. CAR 91
52.24.6	State the requirements for the maintenance of an enroute track. CAR 91
52.24.8	State the requirements for IFR cruising altitude or flight level. CAR 91
52.26	<b>General Operating Restrictions</b>
52.26.2	State the restrictions on the use of portable electronic devices in flight. CAR 91
52.26.4	State the speed limitations on aircraft operating under IFR. CAR 91

<b>Sub Topic</b>	<b>Syllabus Item</b>
52.26.6	State the restrictions when operating IFR in icing conditions. CAR 91
52.26.8	State the minimum altitudes for IFR flight. CAR 91
	<b>Flight Planning and Preparation</b>
52.28	<b>Flight Preparation</b>
52.28.2	Explain the requirements for obtaining and considering relevant information prior to flight. CAR 91
52.28.4	Describe the publications and their content that provide operational route and aerodrome information.
52.28.6	Derive operational information from charts and publications that provide route, approach and aerodrome information.
52.30	<b>Alternate Requirements</b>
52.30.2	State the meteorological minima at destination which would require an alternate to be nominated. CAR 91
52.30.4	Determine the meteorological minima required at an aerodrome for it to be nominated as an IFR alternate. CAR 91
52.30.6	State the power supply requirements for the selection of an aerodrome as an alternate on an IFR air operation. CAR 91
52.30.8	State the reference datum for takeoff meteorological minima for IFR operations. CAR 91
52.30.10	State the reference datum for landing meteorological minima for IFR operations. CAR 91
52.30.12	State the reference datum for alternate meteorological minima for IFR operations. AIP ENR
52.32	<b>Fuel Requirements</b>
52.32.2	State the fuel reserve required for an IFR flight in a non-turbine-powered aeroplane. CAR 91
52.32.4	State the fuel reserve required for an IFR flight in a turbine-powered aeroplane or a helicopter. CAR 91
52.34	<b>Flight Plans</b>
52.34.2	State the requirements for the filing of a flight plan for flight under IFR. CAR 91
52.34.4	State the notification lead time for filing an IFR flight plan. CAR 91 & AIP ENR
52.34.6	State the requirements for adhering to an IFR flight plan. CAR 91
52.34.8	State the requirements for the notification of changes to a filed IFR flight plan. CAR 91
52.34.10	State the requirements for an inadvertent departure from an IFR flight plan. CAR 91

<b>Sub Topic</b>	<b>Syllabus Item</b>
52.34.12	State the requirements for the terminating an IFR flight plan at an aerodrome without ATS. CAR 91
	<b>Air Traffic Services</b>
52.36	<b>Communications</b>
52.36.2	Derive from operational publications, the required radio frequency for communicating with specified ATC units.
52.36.4	State the requirements for making position reports to an ATS unit. CAR 91 & AIP ENR
52.36.6	State the contents of various IFR position reports. AIP ENR
52.36.8	State the purpose of Universal Communications Services (UNICOM). AIP GEN
52.36.10	State the purpose of an Aerodrome Frequency Response Unit (AFRU). AIP GEN
52.36.12	State the purpose of Aerodrome and Weather Information Broadcasts (AWIB). AIP GEN
52.36.14	State the meaning of the various light signals from a control tower. CAR 91 & AIP AD
52.36.16	State the communications requirements when TIBA procedures are in force. AIP ENR
52.38	<b>Clearances</b>
52.38.2	State the requirements for complying with ATC clearances and instructions. CAR 91 & AIP ENR
52.38.4	State the requirements for coordinating with an aerodrome flight information service. CAR 91
52.38.6	State the requirements for receiving an ATC clearance prior to entering various types of airspace, and ground manoeuvring area. CAR 91 & AIP ENR
52.38.8	State the requirements for receiving an ATC clearance prior to re-entering controlled airspace. CAR 91 & AIP ENR
52.40	<b>Traffic Separation</b>
52.40.2	Describe the situations where Air Traffic Control is responsible for the provision of separation between VFR, SVFR and IFR traffic. AIP ENR
52.40.4	Describe the situations where the pilot-in-command of an IFR flight is responsible for maintaining separation from other traffic. AIP ENR
52.40.6	Describe the normal separation standards applied by ATC. AIP ENR
52.40.8	Describe the situations where the normal separation may be reduced. AIP ENR
52.40.10	State the meaning of the term “Essential Traffic”. AIP ENR
52.40.12	State the conditions under which longitudinal separation between reciprocal track aircraft may be reduced. AIP ENR

<b>Sub Topic</b>	<b>Syllabus Item</b>
52.40.14	State the minimum lateral and longitudinal separation between RNP10 aircraft, as permitted by ICAO Regional Supplementary procedures (Doc 7030). AIP ENR
52.40.16	State the deviation from an assigned indicated airspeed or Mach number and ETA outside of which pilots are required to notify ATC. CAR 91
52.40.18	State the wake turbulence separation requirements for light and medium aircraft. AIP AD
52.40.20	State the maximum airspeed below 10,000 feet. CAR 91
52.40.22	State the minimum descent height in IMC at an unattended aerodrome where traffic conflict may exist. AIP ENR
52.42	<b>Terrain Clearance</b>
52.42.2	Describe the determination of the minimum safe altitude for IFR flight. AIP GEN
52.42.4	Explain the coverage and use of VORSEC charts. AIP GEN
52.42.6	Explain the coverage and use of 25nm Minimum Sector Altitude diagrams. AIP GEN
52.42.8	State when the radar control service is responsible for the provision of terrain clearance. AIP ENR
52.42.10	Explain how radar control provides terrain clearance. AIP ENR
52.42.12	Describe the use of DME descent steps for maintaining terrain clearance during departure climb or descent for an approach. AIP GEN & ENR
52.44	<b>Weather Avoidance</b>
52.44.2	State the requirements for deviation off track for weather avoidance. AIP ENR
52.46	<b>Radar Services</b>
52.46.2	Describe the radar services available to IFR flights. AIP ENR
52.46.4	Describe the responsibility of the radar controller to keep an aircraft within controlled airspace. AIP ENR
52.46.6	State the accuracy limits required when under radar speed control. AIP ENR
52.46.8	State the distance from touchdown that radar speed control can be maintained on an instrument and a visual approach. AIP ENR
52.46.10	State the meteorological and other conditions which allow a radar controller to vector an aircraft for a visual approach. AIP ENR
52.46.12	State the criteria for a radar controller to consider an unknown aircraft to be on a conflicting path with another aircraft. AIP ENR
52.48	<b>Global Navigation Satellite System</b>
52.48.2	State the equipment required by aircraft within the New Zealand flight information region, using GPS as a primary means navigation system. CAR 19

<b>Sub Topic</b>	<b>Syllabus Item</b>
52.48.4	State the meaning of a GPS “sole means navigation system”. CAR 19
52.48.6	State the restriction on using GPS as a sole means navigation system under IFR in the New Zealand flight information region. CAR 19
52.48.8	State the actions required of pilots, under IFR using GPS equipment as a primary means navigation system, if system degradation occurs. CAR 19
52.48.10	State the requirements which must be met before a pilot of an aircraft operating within the New Zealand flight information region, under IFR, using GPS equipment as a primary means navigation system, is permitted random flight routing. CAR 19
52.48.12	State the requirements for carrying out an instrument approach using GPS equipment as a primary means navigation system. CAR 19
52.48.14	State the requirements for the nomination of an alternate if GPS is used as a primary means navigation system. CAR 19
	<b>Airspace; Aerodromes; and Heliports</b>
52.50	<b>Altimetry</b>
52.50.2	Explain the altimeter setting requirements for flight under IFR. CAR 91 & AIP ENR
52.50.4	State the altimeter setting to use when QNH is not available prior to takeoff. AIP ENR
52.50.6	Describe QNH zones and state when zone QNH should be used. AIP ENR
52.50.8	Describe the transition altitude, layer and level. AIP ENR
52.52	<b>Cruising Levels</b>
52.52.2	State the altitude/flight level requirements when cruising IFR within the New Zealand Domestic FIR. CAR 91 & AIP ENR
52.52.4	Determine from charts and publications the minimum flight altitude (MFA) for a route sector.
52.52.6	Describe situations where ATC may assign cruising altitudes not in accordance with the IFR table of cruising altitudes. AIP ENR
52.52.8	State the position by which an aircraft must be at a higher MFA if one is specified. AIP GEN
52.54	<b>Transponders</b>
52.54.2	State the requirements for the operation of transponders within the New Zealand Domestic FIR. CAR 91 & AIP ENR
52.54.4	Describe the procedures required of pilots operating transponders. AIP ENR
52.54.6	Describe the altitude accuracy limits of transponders. AIP ENR
52.54.8	State the requirements and limitations on an aircraft operating in transponder mandatory airspace without an operating transponder. CAR 91 & AIP ENR

<b>Sub Topic</b>	<b>Syllabus Item</b>
52.56	<b>Airspace</b>
52.56.2	State the rules pertaining to operating IFR in the various classes of airspace. CAR 91 & AIP ENR
52.56.4	Describe the vertical limits and purpose of control zones (CTR). CAR 71
52.56.6	Describe the vertical limits and purpose of control areas (CTA). CAR 71
52.56.8	State the status and conditions relating to flight in VFR transit lanes. AIP ENR
52.56.10	Describe the status and purpose of a general aviation area (GAA). CAR 91 & AIP ENR
52.56.12	Describe control zone sectors. CAR 71
52.56.14	Describe visual reporting points.
52.56.16	Describe the status of controlled airspace when ATC go off duty. AIP GEN
52.56.18	State the restrictions on operating an aircraft in a restricted area. CAR 91 & AIP ENR
52.56.20	State the restrictions on operating an aircraft in a military operational area (MOA). CAR 91 & AIP ENR
52.56.22	State the purpose of the various conditional areas. AIP ENR
52.56.24	State the restrictions and operating considerations relating to operating an aircraft in an approach conditional area (ACA). CAR 91
52.56.26	State the restrictions and operating considerations relating to operating an aircraft in a mandatory broadcast zone (MBZ). CAR 91 & AIP ENR
52.56.28	State the restrictions and operating considerations relating to operating an aircraft in a volcanic hazard area (VHA). CAR 91 & AIP ENR
52.56.30	State the restrictions and operating considerations relating to operating an aircraft in a danger area. CAR 91 & AIP ENR
52.56.32	State the restrictions and operating considerations relating to operating an aircraft in a parachute drop zone (PDZ). AIP ENR
52.56.34	State the restrictions and operating considerations relating to operating an aircraft in VFR special procedures areas (SPA). AIP ENR
52.56.36	State the operating considerations relating to operating an aircraft over or close to temporary hazards/airspace. AIP ENR
52.56.38	Explain the requirements for the operation of an aircraft in RNP airspace. AIP ENR
52.56.40	Interpret airspace information on aeronautical charts.
52.58	<b>Aerodromes and Heliports</b>
52.58.2	Describe the limitations on the use of a place as an aerodrome or heliport. CAR 91
52.58.4	Describe the method of runway designation. AIP AD

<b>Sub Topic</b>	<b>Syllabus Item</b>
52.58.6	Describe the movement area of an aerodrome. CAR 1
52.58.8	Interpret information on aerodrome/heliport charts. AIP GEN & AIP Volume 4
52.60	<b>Aerodrome Lighting</b>
52.60.2	Describe the lighting intensity classifications.
52.60.4	Describe the following lighting systems: <ul style="list-style-type: none"><li>(a) Runway edge lighting (REDL);</li><li>(b) Runway landing threshold lighting (RTHL);</li><li>(c) Runway end lighting (RENL);</li><li>(d) Displaced threshold lighting;</li><li>(e) Runway centreline lighting system (RCLL);</li><li>(f) Runway touchdown zone lighting (RTZL);</li><li>(g) Runway end identifier lighting (REIL);</li><li>(h) Approach lighting systems (ALS);</li><li>(i) Circling guidance lighting (CGL);</li><li>(j) Runway lead in lighting (RLLS);</li><li>(k) Pilot activated lighting (PAL);</li><li>(l) T-Visual approach slope indicators (T-VASIS);</li><li>(m) Visual approach slope indicators (VASIS);</li><li>(o) Precision approach path indicators (PAPI).</li></ul>
52.60.6	Describe aeronautical light beacons and marine lights.
52.60.8	Describe the indication of above, on and below slope for: <ul style="list-style-type: none"><li>(a) PAPIs;</li><li>(b) VASIS; and,</li><li>(c) T-VASIS.</li></ul>
	<b>Emergencies</b>
52.62	<b>Communications and Equipment</b>
52.62.2	State the transponder code a pilot should set to indicate an emergency condition. AIP ENR
52.62.4	State the transponder code a pilot should set to indicate a loss of communications. AIP ENR

<b>Sub Topic</b>	<b>Syllabus Item</b>
52.62.6	State the transponder code a pilot should set to indicate that the aircraft is being subjected to unlawful interference. AIP ENR
52.62.8	Describe the means by which ATC will verify the transmission of an emergency SSR transponder code. AIP ENR
52.62.10	Describe the use of the speechless technique using un-modulated transmissions. AIP ENR
52.62.12	State the procedures for the emergency activation of an ELT. AIP GEN
52.62.14	State the pilot action required following the inadvertent transmission of an ELT. AIP GEN
52.62.16	State the requirements for the operational testing of an ELT. AIP GEN
52.62.18	State the procedures to be followed on receiving an ELT signal. AIP GEN
	<b>Instrument Departures and Approaches</b>
52.64	<b>Departure Procedures</b>
52.64.2	Interpret information on SID and Departure Procedure charts.
52.64.4	Determine the IFR takeoff minima for a departure off a given runway. AIP ENR
52.64.6	State the IFR takeoff minima if it is not prescribed in the AIPNZ VOL 2 & 3. AIP ENR
52.64.8	State the CAR Part 91 requirements and limitations of IFR reduced takeoff minima. CAR 91 & AIP ENR
52.64.10	State the minimum height for a turn after takeoff on departure. AIP ENR
52.64.12	State the minimum climb gradient on a SID unless otherwise specified. AIP ENR
52.64.14	Calculate the rate of climb required to meet the net climb gradient specified on instrument departures. AIP ENR
52.64.16	State when a departure procedure terminates. AIP ENR
52.64.18	State the limitation on the termination of radar vectoring for a departing IFR aircraft. AIP ENR
52.64.20	State the requirements for broadcasting intentions when departing from an unattended aerodrome. AIP ENR
52.64.22	State the requirements for and limitations on a visual departure. AIP ENR
52.64.24	Describe the operating restrictions where an IFR departure procedure is not promulgated. AIP ENR
52.66	<b>Holding Procedures</b>
52.66.2	State the maximum speed in enroute holding patterns. AIP ENR
52.66.4	State the maximum entry and holding pattern speeds. AIP ENR

<b>Sub Topic</b>	<b>Syllabus Item</b>
52.66.6	Identify and describe appropriate holding pattern entry procedures. AIP ENR
52.66.8	State the time within which onwards clearance or a new onwards clearance time should be passed the pilots of aircraft in a precautionary holding pattern. AIP ENR
52.66.10	State the angle of bank required during turns in a holding pattern. AIP ENR
52.68	<b>Approach Procedures</b>
52.68.2	Describe the descent limitations from cruise to approach commencement. AIP GEN
52.68.4	Interpret information on STAR charts.
52.68.6	State the limitation on a clearance to fly a STAR. AIP ENR
52.68.8	Define the minimum initial approach altitude. AIP ENR
52.68.10	Interpret information on instrument approach charts.
52.68.12	Determine the IFR meteorological minima for an instrument approach to a given runway.
52.68.14	State the meteorological minima at which must exist prior to a landing off an instrument approach. CAR 91 & AIP ENR
52.68.16	Describe the procedures for joining overhead a navigation aid for an instrument approach. AIP ENR
52.68.18	State the minimum meteorological conditions which must exist before ATC may clear an aircraft for an instrument approach with a descent restriction. AIP ENR
52.68.20	State the meteorological and other conditions which will allow a pilot to request a visual approach in controlled airspace. AIP ENR
52.68.22	State the meteorological and other conditions which allow ATC to advise that conditions are suitable for a visual approach. AIP ENR
52.68.24	State the meteorological and other conditions which will allow a pilot to carry out a visual approach in uncontrolled airspace. AIP ENR
52.68.26	Describe the provision of separation and terrain clearance during a visual approach. AIP ENR
52.68.28	Given an aircraft's Vs, determine its approach category. AIP ENR
52.68.30	State the category A and B speed limitations during an instrument approach under ICAO PANS OPS II procedures. AIP ENR
52.68.32	State the requirements for making position reports during an instrument approach in controlled and uncontrolled airspace. AIP ENR
52.68.34	Describe the procedures for carrying out an instrument approach at an unattended aerodrome. AIP ENR
52.68.36	Determine the minimum descent altitude using a QNH from a remote location. AIP ENR

<b>Sub Topic</b>	<b>Syllabus Item</b>
52.68.38	State when descent below decision altitude or minimum descent altitude may be made on an instrument approach. AIP ENR
52.68.40	Describe the missed approach procedures and limitations. AIP ENR
52.70	<b>Communications and Navigation Aid Failure</b>
52.70.2	Describe the procedures required following a communications failure enroute. AIP ENR
52.70.4	Describe the procedures required following a communications failure during an instrument approach. AIP ENR
52.70.6	Describe the procedure to be carried out in the event of a radio navigation aid failure during an approach. AIP ENR
52.70.8	State the requirements for changing approach types in the event of a radio navigation aid failure during an approach. AIP ENR