



# Flight Examiner Manual

**Module 4.2 - CR SEA**



**CR-SEA Skill Test or Proficiency Check**

**V2021.1**

**General Applicable Framework**

<b>Flight rules:</b>	VFR
<b>Operational rules:</b>	Part-NCO
<b>Crew concept:</b>	SPO
<b>Equipment:</b>	Aeroplane, FSTD
<b>Applicable type or class:</b>	SEP-SEA, MEP-SEA, SET-SEA, MET-SEA, TYPE-SEA
<b>Required examiner certificate:</b>	FE-SEA, CRE-SEA, TRE-SEA



# 1. Introduction

The basic privileges of a CR/TR - SEA holder are to act as PIC and/or COP in the class or type of aeroplane specified in the rating, within the privileges of the relevant aeroplane pilot license.

When conducting the skill test or proficiency-check for renewal or revalidation of the Class-Rating, the Examiner must have due regard for the experience the Candidate may have. Nonetheless, the Examiner shall also appreciate that upon licensing the pilot will be responsible for the safety of their passengers and/or cargo, with the privilege to operate internationally almost unrestricted.



## 2. Test Administration

The Examiner should provide the Candidate with advance information regarding the examination flight routing, by taking into account respective weather forecasts, sea state and local restrictions, to afford the Candidate with sufficient time to prepare for the test. The flight duration shall be at least 45 minutes.

Usually, the Examiner occupies the instructor seat and is the PIC. No other person, if not operationally or organisationally necessary for the conduct of the examination, should be allowed in the aeroplane or simulator. Additionally, ATO/DTO limitations should be considered.

Before proceeding with the test, the Examiner shall verify that the prerequisites are met, including course completion certificate of the ATO/DTO. For the initial issue of class rating sea for SP, SE and ME aeroplanes, the number of multi-choice questions in the written or computer-based examination should at least comprise thirty questions and may be conducted by the training organization. The pass mark should be 75 %.

Accordingly, the following documents and conditions shall be verified if required:

- Passport or ID
- Valid EASA license (LAPL, PPL, CPL, ATPL, MPL)
- Medical EASA Class 1 or 2
- Radiotelephony privileges and language proficiency requirements
- EASA logbook showing the minimum experience and flight instruction.
- Course completion certificate from the ATO/DTO
- Aircraft documents
- Current navigation charts, sea, air and database if applicable
- Insurance of aircraft covering check flights
- Specific equipment for the flight part (e.g. sight-limiting device)
- Sea plane specific equipment (e.g. Life west, ELT, signal equipment, anchor, horn, ropes, bumpers, drain pump, paddle etc.)
- Possible remote area survival equipment.

When the Examiner is satisfied that the prerequisite requirements are met; they should seek confirmation that the Candidate is fit and ready for the test. If so, the Examiner formally starts the test; it is a good practice to take this opportunity to show the examiner credentials.



## 3. Examiner Briefing

The Examiner must brief the following elements:

- Freedom for the Candidate to ask questions
- Purpose and aim of the test
- Applicable weather minimum (e.g. Part-NCO, NAA, ATO/DTO, or test requirements)
- Sea surface, wave, current and wind conditions.
- Expected water traffic.
- Examiner has PIC responsibility; the Candidate acts autonomously as if they were the PIC
- Handling of radiocommunications during specific parts of the test
- Use of the sight-limiting device
- Examiner role-play in normal operations and simulated emergencies
- Engine failure-simulation (minimum safety height, handling of engine-controls).
- Engine-shutdown and restart on multi-engines aeroplane.
- Handling of possible contingencies (technical, weather, ATC)
- Handling of actual emergencies (e.g. engine failure procedures, change of aircraft control)
- Pass, fail, and partial pass criteria, repeat items option, and examination termination rules

When covering pass/fail criteria the examiner should cover general standards of completion in Section 7, including decision-making and airmanship. Some test items may require specific emphasis for the Candidate to understand what is required. The standards of completion should be agreed with the Candidate, and the Examiner should consider actual flight conditions when briefing them. Items which could require special emphasis could be:

- Take-off performance; selection of take-off rejection point
- Landing performance; selection of touchdown point and acceptable tolerances for the different types of landings
- Crosswind take-off and landing; expectation on handling and precision
- Navigation accuracy
- Simulated emergencies, expectation on handling, checklist use and what and how to simulate.

In covering the standards of completion, the Examiner should also review how the Candidate has been trained by the DTO/ATO as procedures and flight techniques might differ between organizations. This is especially important for manoeuvres such as: unusual attitudes, stalls and engine-out procedures, etc.



## 4. Candidate Flight Briefing

The Examiner should allow the Candidate to brief uninterrupted; the Candidate shall conclude their briefing by making a go/no-go decision. The briefing should cover the following aspects:

- Timetable (e.g. slot planning, boarding time)
- Operational navigation flight plan if applicable for the kind of test
- Weather situation and forecast
- Notams, including relevant local military restrictions, as applicable
- National parks, sensitive areas, nautical regulations related to the planned flight
- Status of water-sites planned for take-offs and landings and emergencies
- Fuel planning
- Mass and balance calculation
- Performance calculation
- ATC flight plan, if applicable
- Aircraft status and documents, including maintenance release
- Threat and Error Management aspects



## 5. Oral Examination on Ground

The Examiner should verify the relevant theoretical knowledge of the Candidate during the briefing on the ground by asking questions related, as far as possible, to the planned flight covering, for example, the following areas:

- Follow-up questions to the Candidate's briefing
- Regulations (EU and relevant specific national requirements)
- Licensing (privileges, limitations, ratings validity, currency requirements)
- Operational aspects (radio communication procedures at ports if required)
- Weather information and interpretation
- Sea state, tides, waves, navigation, Lights, signals and right of way
- Airspace structure and limitations
- Rules of sea-traffic
- Aircraft systems, limitations, performance, mass and balance
- Flight planning
- Navigation charts (Sea and Air)
- Emergency procedures, including sea rescue (contact phone / handheld)
- Sea plane specific equipment, including floats and sea rudder.



## 6. Skill Test and Proficiency Check items

The use of checklist, airmanship, control of aeroplane by external visual reference, anti-icing/de-icing procedures, etc., apply in all sections.

Section 5-Abnormal and Emergency Procedures may be combined with Sections 1 through 4

Section 6- Simulated Asymmetric Flight may be combined with Sections 1 through 5

Manoeuvres/Procedures		
Section 1 - Departure		
1.1	Pre-flight including: - Documentation - Mass and Balance - Weather briefing; and - NOTAM	<ul style="list-style-type: none"><li>• Check that all documents required for the flight are correct and correct</li><li>• obtain and assess all elements of the prevailing and forecast weather conditions</li><li>• obtain and assess all aeronautical information and NOTAMS</li><li>• complete an appropriate flight navigation log and chart</li><li>• determine that the aeroplane is correctly fueled for the flight</li><li>• complete mass and balance schedule and establish performance criteria</li></ul>
1.2	Pre-start checks external/internal	<ul style="list-style-type: none"><li>• perform all elements of the aeroplane pre-flight inspections as detailed</li><li>• confirm that the aeroplane is in a serviceable and safe condition for flight</li><li>• check and complete all necessary documentation</li><li>• complete an appropriate passenger emergency procedure briefing for the Examiner</li></ul>
1.3	Engine start-up and shutdown Normal malfunctions	<ul style="list-style-type: none"><li>• complete all recommended engine starting and after starting procedures</li><li>• simulate reasons for an engine-shutdown (e.g. no oil pressure)</li></ul>
1.4	Taxiing	<ul style="list-style-type: none"><li>• complete all recommended taxiing checks and procedures</li><li>• comply with markings and signals</li><li>• follow ATC instructions if applicable</li></ul>
1.5	Step taxiing	<ul style="list-style-type: none"><li>• check the water area clear of traffic, obstacles and birds</li><li>• taxi on the step and perform turns</li><li>• determine the wind direction</li><li>• establish the wind correction with the aeroplane</li></ul>



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1.6	Mooring: Beach Jetty pier Buoy	<ul style="list-style-type: none"><li>• use correct methods and speeds</li><li>• demonstrate proficiency in mooring procedures of the aeroplane at different locations if applicable</li></ul>
1.7	Engine-off sailing	<ul style="list-style-type: none"><li>• demonstrate correct use of rudders and ailerons</li><li>• demonstrate knowledge and proficiency in using the airplane doors for safely navigating by use of wind with engines in idle or shut-down</li></ul>
1.8	Pre-departure checks: Engine run up (if applicable)	<ul style="list-style-type: none"><li>• complete all pre-departure checks and drills including engine operation</li><li>• Use a suitable area for runup</li></ul>
1.9	Take-off procedure: -normal with flight manual flap settings; and -crosswind (if conditions available)	<ul style="list-style-type: none"><li>• complete all departure checks and drills including engine operation</li><li>• position the aeroplane correctly for take off and advance the throttles to take off power with appropriate checks</li><li>• use the correct take off technique using the recommended speeds for rotation/lift-off and initial climb</li><li>• check the airspace and the waterarea clear for other traffic</li><li>• ensure a safe climb and departure adjusting power and aeroplane configuration as appropriate</li><li>• complete all necessary after take-off checks</li></ul>
1.10	Climbing -turns onto headings -level off	<ul style="list-style-type: none"><li>• use charts or other published information as required</li><li>• execute a safe departure in accordance with clearance, if applicable and with due regard for other air traffic</li><li>• use correct lookout techniques</li><li>• observe the Rules of the Air and ATC Regulations</li><li>• maintain directional control and drift corrections throughout</li><li>• follow any noise routing or departure procedures and ATC instructions</li><li>• complete all necessary climb checks</li></ul>
1.11	ATC liaison – compliance, R/T procedure	<ul style="list-style-type: none"><li>• demonstrate standard R/T procedures and phraseology</li><li>• demonstrate compliance with ATC instructions</li></ul>



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Section 2 - Airwork VFR		
2.1	Straight and level flight at various airspeeds including flight at critically low airspeed with and without flaps (including approach to VMCA, when applicable)	<ul style="list-style-type: none"><li>• demonstrate control of heading, altitude and airspeed in straight and level flight by visual attitudes while maintaining a correct lookout technique</li><li>• demonstrate correct use of trim. consider all safety checks before the manoeuvres where necessary</li><li>• select and stabilise the aeroplane at a nominated low airspeed above the stall speed whilst maintaining balance, trim and lookout. Maintain specified altitude/level, heading and speed as specified by the Examiner; maintain safe bank angles, speed, and altitude during turning and complete turns onto specified headings</li></ul>
2.2	Steep turns (360° left and right at 45° bank)	<ul style="list-style-type: none"><li>• demonstrate the correct lookout technique before, during and after turns</li><li>• establish and maintain throughout the turn the nominated altitude and speed</li><li>• co-ordinate the entry to steep turns to achieve at least 45° bank and maintain the turn through at least 360 degrees</li><li>• co-ordinate the recovery from turns to straight and level flight as directed by the Examiner without loss/gain of height</li></ul>
2.3	Stalls and recovery:  i) clean stall; ii) approach to stall in descending turn with bank with approach configuration and power; iii) approach to stall in landing configuration and power; and iv) approach to stall, climbing turn with take-off flap and climb power (single-engine aeroplanes only)	<ul style="list-style-type: none"><li>• consider safety checks before stalling</li><li>• consider that some seaplanes, especially with STOL-attributes may stall suddenly with great bank.</li><li>• establish the stall entry as appropriate from straight and turning flight and select the required aeroplane configuration</li><li>• maintain heading (or bank angle 10° - 30° as required) to stall entry</li><li>• recognize the symptoms of incipient and full stalls</li><li>• recover systematically by reducing the AoA and then re-establishing a stable flight path</li><li>• complete all necessary checks and drills</li><li>• maintain lookout throughout</li></ul>
2.4	ATC liaison – compliance, R/T procedure	<ul style="list-style-type: none"><li>• obtain and comply with ATC clearances using correct R/T phraseology</li><li>• maintain awareness of other traffic through R/T and lookout</li></ul>



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Section 3 - Enroute Procedures VFR		
3.1	Flight plan, dead reckoning and map reading	<ul style="list-style-type: none"><li>• complete all elements of VFR planning for the route prescribed with particular reference to planned altitudes and safe levels of operation</li><li>• identify position visually by reference to ground features and map</li></ul>
3.2	Maintenance of altitude, heading and speed	<ul style="list-style-type: none"><li>• control aeroplane using visual attitude flying techniques</li><li>• maintain the heading, height and speed as computed in navigation log or advised by the Examiner within the prescribed limits</li></ul>
3.3	Orientation, timing and revision of ETAs	<ul style="list-style-type: none"><li>• maintain awareness of surrounding terrain, obstacles and restricted airspaces</li><li>• navigate by means of calculated headings, ground speed and time</li><li>• achieve destinations or turning points within 3 minutes of ETA</li><li>• maintain a navigation log to monitor flight progress and fuel situation</li></ul>
3.4	Use of radio navigation aids (if applicable)	<ul style="list-style-type: none"><li>• select and identify appropriate radio and navigation aids as required or nominated by Examiner</li><li>• locate and record the aeroplane position by using radio navigation equipment when required by the Examiner</li><li>• intercept and maintain given tracks or radials using the navigation aids nominated by the Examiner</li></ul>
3.5	Flight management (flight log, routine checks including fuel, systems and icing)	<ul style="list-style-type: none"><li>• complete all necessary checks and drills</li><li>• set engine power for cruise or endurance performance in accordance with AFM</li><li>• adjust and monitor fuel consumption for range or endurance as appropriate</li><li>• make regular checks for carburetor icing, if appropriate</li><li>• select fuel to keep balance within limits</li><li>• display sound airmanship and cockpit management</li></ul>
3.6	ATC liaison – compliance, R/T procedure	<ul style="list-style-type: none"><li>• set and cross check altimeters to QNH or Standard pressure setting, as appropriate</li><li>• maintain two way R/T communication using correct phraseology throughout</li><li>• obtain ATC clearances or flight information, as appropriate</li><li>• comply with ATC clearances and instructions when required</li></ul>



## Section 4 - Arrivals and landings

4.1	Aerodrome arrival procedure (amphibians only)	<ul style="list-style-type: none"><li>• carry out appropriate checks and drills</li><li>• set altimeters and cross check in accordance with check list or as required</li><li>• use the actual QNH if announced by the airport</li><li>• comply with published arrival procedure or clearance</li></ul> <p><i>maintain adequate lookout and collision avoidance</i></p>
4.2	Normal landing	<ul style="list-style-type: none"><li>• Perform an adequate reconnaissance of the planned landing and take-off area for obstacles or floating objects</li><li>• consider weather and wind conditions, water surface and obstructions, traffic on the water and in the air</li><li>• plan and follow a suitable pattern and orientation with the landing area</li><li>• establish the recommended approach configuration adjusting speed and rate of descent to maintain a stabilised approach</li><li>• achieve the selected touchdown area at the recommended speed</li><li>• adjust descent and roundout (flare) to achieve a safe landing with little or no float with appropriate drift and crosswind correction depending on the water-surface condition.</li><li>• maintain directional control and wind-correction after touchdown</li><li>• complete all necessary checks and drills</li></ul>
4.3	Flapless landing (if suitable conditions)	<ul style="list-style-type: none"><li>• consider weather and wind conditions, water- surface and obstructions</li><li>• plan and follow a suitable pattern and orientation with the landing area</li><li>• establish the recommended approach configuration adjusting speed and rate of descent to maintain a stabilized approach</li><li>• achieve the selected touchdown area at the recommended speed</li><li>• adjust descent and roundout (flare) to achieve a safe landing with little or no float with appropriate drift and crosswind correction depending on the water-surface condition</li><li>• maintain directional control and wind-correction after touchdown</li></ul> <p>complete all necessary checks and drills</p> <p>RMK: Higher than normal touchdown-speeds may overstress a heavy airplane in rough water.</p>
4.4	Crosswind landing (if suitable conditions)	<ul style="list-style-type: none"><li>• consider weather and wind conditions, water- surface and obstructions</li><li>• plan and follow a suitable pattern and orientation with the landing area</li><li>• establish the recommended approach configuration adjusting speed and rate of descent to maintain a stabilised approach</li><li>• achieve the selected touchdown area at the recommended speed</li><li>• adjust descent and roundout (flare) to achieve a safe landing with little or no float with appropriate drift and crosswind correction depending on the water-surface condition</li><li>• maintain directional control and wind-correction after touchdown</li><li>• complete all necessary checks and drills</li></ul>



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4.5	Approach and landing with idle power from up to 2000' above the water (single-engine aeroplanes only; can be combined with 5.3. Simulated forced landing without power)	<ul style="list-style-type: none"><li>• coordinate with ATC or other traffic, respectively communicate intention; ensure adequate spacing</li><li>• visualise glide path to touch down and adjust trajectory and configuration accordingly</li><li>• consider weather and wind conditions, landing surface and obstructions</li><li>• establish the recommended approach configuration adjusting speed and rate of descent to maintain a stabilised approach</li><li>• achieve the selected touchdown area at the recommended speed</li><li>• adjust descent and roundout (flare) to achieve a safe landing with little or no float with appropriate drift and crosswind correction</li><li>• complete all necessary checks and drills</li><li>• consider a go around if the landing will not take place at the planned touch down area</li></ul>
4.6	Go-around from minimum height	<ul style="list-style-type: none"><li>• execute a timely decision to discontinue the approach either when instructed or as considered necessary</li><li>• apply appropriate power and control aeroplane attitude to initiate a safe climb maintaining balance and heading</li><li>• adjust configuration and speed to achieve a positive climb at VY or VX as appropriate</li><li>• maintain take off power until a safe manoeuvring altitude is reached and then adjust to a normal climb configuration and speed</li><li>• complete all necessary checks and drills</li></ul>
4.7	Glassy water landing Rough water landing	<ul style="list-style-type: none"><li>• select an appropriate landing site with suitable visual reference for glassy water landings</li><li>• perform a reconnaissance overfly of landing and take-off site</li><li>• establish a stabilized slow descent for glassy water landings using visual cues</li><li>• establish an appropriate configuration for rough water landings if applicable</li><li>• determine landing direction depending on site, water and wind conditions</li><li>• glassy water landings: adjust proper speed and low rate of descent with correct pitch attitude to maintain a stabilized approach until touchdown</li><li>• rough water landings: adjust low speed and low rate of descent at touchdown and use correct pitch attitude when coming in contact with waves. (can be simulated in the absence of conditions)</li><li>• control the aeroplane safely during and after landing</li></ul>
4.8	ATC liaison – compliance, R/T procedure	<ul style="list-style-type: none"><li>• obtain and comply with ATC clearances using correct R/T phraseology</li><li>• adjust pattern/speed to maintain spacing with other traffic in the air and on the water</li><li>• maintain awareness of other air- and sea-traffic through R/T and lookout</li></ul>



## Section 5 - Abnormal and Emergency Procedures

5.1	Rejected take-off at a reasonable speed	<ul style="list-style-type: none"><li>• at the Examiners action or call-out perform a rejected take off (at a reasonable speed)</li><li>• safely bring the aircraft to a halt or taxi-speed following a simulated emergency during the initial part of the take-off run</li></ul>
5.2	Simulated engine failure after take-off (single-engine aeroplanes only)	<ul style="list-style-type: none"><li>• establish safe flight speed without delay</li><li>• execute emergency drills as 'touch drills' without error</li><li>• when time permits, investigate possible cause of engine failure and take corrective action</li><li>• plan and execute further actions to ensure safe recovery of the aeroplane, passengers and crew</li><li>• select a suitable water-area for landing</li></ul>
5.3	Simulated forced landing without power (single-engine aeroplanes only)	<ul style="list-style-type: none"><li>• choose a suitable landing area with due regard for landing surface (land or water), surroundings and wind velocity</li><li>• plan descent to achieve a safe approach to chosen landing area such that a safe landing would be likely</li></ul>
5.4	Simulated emergencies: i) fire or smoke in flight; and ii) systems' malfunction as appropriate	<ul style="list-style-type: none"><li>• analyse emergency or abnormal situation and formulate appropriate plan</li><li>• execute abnormal or emergency drills</li><li>• plan and execute further actions to ensure safe recovery of aeroplane, passengers and crew</li><li>• use check list to confirm actions when time permits</li><li>• make suitable emergency R/T calls (given to Examiner but not transmitted)</li><li>• inform ATC of practice emergency situation and assistance required (where appropriate)</li></ul>
5.5	ATC liaison – compliance, R/T procedure	<ul style="list-style-type: none"><li>• demonstrate standard R/T procedures and phraseology</li><li>• demonstrate compliance with ATC instructions if applicable</li><li>• apply simulated appropriate emergency-procedures</li></ul>



Section 6 – Flight with One Engine Operative		
6.1	Simulated engine failure during take-off (at a safe altitude unless carried out in FFS and FNPT II)	<ul style="list-style-type: none"><li>• maintain control of aeroplane direction and speed following simulated engine failure</li><li>• identify failed engine</li><li>• complete checks and drills</li><li>• establish safe climb at VYSE in trim</li></ul>
6.2	Engine shutdown and restart (ME skill test only)	<ul style="list-style-type: none"><li>• should be performed either simulated, in a FSTD or under safe conditions</li><li>• control aircraft in heading, altitude, speed and balance during full engine shut down at safe altitudes, carry out appropriate drills and checks</li><li>• control aircraft heading, height and speed during re-start drills according to check list and re-establish aircraft to symmetric cruising flight</li></ul>
6.3	Asymmetric approach and go-around	<ul style="list-style-type: none"><li>• fly a visual approach with asymmetric power to establish a final approach</li><li>• maintain a stable (trimmed) approach in the correct configuration</li><li>• make a clear decision to land/go-around at or before appropriate asymmetric committal altitude/height (ACH)</li><li>• at ACH or when instructed, carry out a go-around to establish a safe climb in the recommended configuration at VYSE</li></ul>
6.4	Asymmetric approach and full stop landing	<ul style="list-style-type: none"><li>• fly a visual circuit with asymmetric power to establish a final approach</li><li>• maintain a stable (trimmed) approach in the correct configuration</li><li>• execute a safe landing at the recommended speed/configuration in the appropriate water-landing area</li></ul>
6.5	ATC liaison – compliance, R/T procedure	<ul style="list-style-type: none"><li>• demonstrate standard R/T procedures and phraseology</li><li>• demonstrate compliance with ATC instructions if applicable</li><li>• apply simulated appropriate emergency-procedures</li></ul>

**Section 6 shall be completed to revalidate a multi-engine class rating sea, VFR only, where the required experience of 10 route sectors within the previous 12 months has not been completed.**

“Route Sector” means a flight comprising take-off, departure, cruise of not less than 15 minutes, arrival, approach and landing phases.



## 7. Standard of Completion

To pass the Test, the Candidate shall demonstrate the ability to:

- a operate the aeroplane within its limitations;
- b complete all manoeuvres with smoothness and accuracy;
- c exercise good judgment and airmanship; that is, to consistently use good judgement and well-developed knowledge, skills and attitudes to accomplish flight objectives;
- d apply aeronautical knowledge;
- e maintain control of the aeroplane at all times in such a manner that the successful outcome of a procedure or manoeuvre is never seriously in doubt;
- f stay within the following limits. Those tolerances are for general guidance; the Examiner should make allowance for turbulent conditions and the handling qualities and performance of the aeroplane used:

height:	(i) normal flight	$\pm 100$ ft
	(ii) with simulated engine failure	$\pm 150$ ft (ME only)
heading or tracking of radio aids:	(i) normal flight	$\pm 5^\circ$
	(ii) with simulated engine failure	$\pm 10^\circ$ (ME only)
speed:	(i) take-off and approach	$\pm 5$ knots
	(ii) all other flight regimes	$\pm 10$ knots

Compared to requirement (a) and (f), completion standards (b) to (e) don't rely on quantitative tolerance, but on qualitative one. Usage of guidance provided in subpart 8 should provide for a fact-based and consistent assessment and decision of those qualitative requirements.



## 8. Knowledge, Skills and Attitude Assessment Guidance

The following tables are designed to give the Examiner guidance when assessing the Knowledge, Skills and Attitudes required by the Candidate to successfully complete each section of the test. It should aid the Examiner to assess the standard of completion elements laid down in subpart 7 under (b) to (e) and determine the result.

For each section a brief narrative of the section's objectives is provided, together with the most relevant KSAs.

Section 1 - Departure	
planning and preparation of a safe and compliant flight, including the usage of TEM. Safe and compliant usage of the aircraft on the ground and during the transition to flight	
Knowledge	<ul style="list-style-type: none"><li>• applicable regulations (rules of the air, operational, licensing)</li><li>• weather information interpretation and understanding</li><li>• Notams interpretation and understanding</li><li>• aircraft flight manual structure, relevant information usage</li><li>• aeronautical charts interpretation and usage</li><li>• radio communication procedures and standard phraseology</li></ul>
Skill	<ul style="list-style-type: none"><li>• flight preparation information retrieval</li><li>• searching in official reference documents (e.g. AFM, AIP)</li><li>• standard operating procedures and checklist usage</li><li>• smooth aircraft handling</li><li>• communicate clearly and assertively</li></ul>
Attitude	<ul style="list-style-type: none"><li>• looking for information and assess them critically</li><li>• safety-minded rather than mission-minded</li><li>• takes effective decisions</li><li>• assertive when in doubt</li><li>• aware of his limited experience and abilities</li></ul>



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## Section 2 - Airwork VFR

safe and smooth aircraft operation throughout the certified flight envelope, awareness of the envelope limits and how to return to a safe flight, should an excursion occur

<b>Knowledge</b>	<ul style="list-style-type: none"><li>• aircraft pitch-power-configuration values</li><li>• recovery procedures from an unusual aircraft state (stall, approach to stall, spiral dive)</li><li>• spin prevention and spin recovery procedure</li><li>• causes of load-factor increase and effect on stall speed</li><li>• critical airspeeds (e.g. <math>V_s</math>, <math>V_{ne}</math>, <math>V_{no}</math>, <math>V_a</math>) and respective ASI markings</li></ul>
<b>Skill</b>	<ul style="list-style-type: none"><li>• establish stabilised flight path in trim, with the required power, airspeed, or vertical speed, as required</li><li>• smooth, precise, and coordinated aircraft handling</li><li>• smooth flight path changes, following the established SOPs</li><li>• correct and systematic application of recovery drills</li></ul>
<b>Attitude</b>	<ul style="list-style-type: none"><li>• acquire and update his knowledge about his position and potential threats (e.g. traffic, terrain, flight path) and consider their future evolution</li><li>• set priorities (Fly, Navigate, Communicate, Manage)</li><li>• assertive, seek clarification of doubts and misunderstandings before acting</li></ul>

## Section 3 - En-route Procedures VFR

navigating safely and effectively between A and B, in compliance with the regulation; monitoring the flight and maintaining an awareness of the changing environment; implementing adequate solutions as necessary

<b>Knowledge</b>	<ul style="list-style-type: none"><li>• navigation charts legend and charts interpretation</li><li>• operational flight plan usage</li><li>• onboard navigation and communication equipment use and limitation</li><li>• applicable regulation (airspace class, weather minima)</li><li>• radiotelephony requirements, procedures, and applicable standard phraseology</li></ul>
<b>Skill</b>	<ul style="list-style-type: none"><li>• chart and ground reading (reconciliation of ground features and chart information)</li><li>• proficient usage of onboard navigation and communication equipment</li><li>• smooth tracking of the required ground track or radio-navigation track, while maintaining altitude</li><li>• communicate clearly, assertively, and in due time</li><li>• flight replanning and diversion implementation</li><li>• ability to fly basic manoeuvres, and maintain aircraft control, in simulated IMC</li></ul>
<b>Attitude</b>	<ul style="list-style-type: none"><li>• aware of the current situation and its possible evolution, and proactively generating options</li><li>• set priorities (Fly, Navigate, Communicate, Manage) and manage workload</li><li>• takes effective decisions, displaying leadership</li><li>• considerate about other traffics and the potential threat</li><li>• ready and willing to seek assistance as necessary (e.g. from ATC)</li></ul>



## Section 4 - Arrivals and Landings

safe arrival and entry into a landing or airport area in compliance with the regulation; structured pattern and stable approach leading to a safe landing in different configurations; discontinuation of the approach or landing

<b>Knowledge</b>	<ul style="list-style-type: none"><li>• arrival procedures, standard pattern, visual approach chart reading, briefing structure and purpose</li><li>• engine-out pattern and key positions</li><li>• applicable landing techniques with different winds and configurations</li><li>• go around procedures and applicable SOPs</li><li>• radiotelephony requirements, procedures, and applicable standard phraseology</li><li>• post-flight actions (e.g. post-flight inspection, logbook entry, flight plan closing, occurrence reporting)</li></ul>
<b>Skill</b>	<ul style="list-style-type: none"><li>• systematic configuration changes, operated within the applicable limitations</li><li>• precise and stable approach path</li><li>• positive touch down within the designated touch down zone, at the correct speed</li><li>• timely decision to abort the approach or landing</li><li>• correct and systematic application of go-around drills</li><li>• safe engine-out approach and landing</li></ul>
<b>Attitude</b>	<ul style="list-style-type: none"><li>• awareness of the other traffics, their intentions, and the resulting impact</li><li>• mindful about the environment and its impact (e.g. wind, sun, impending fog, night)</li><li>• considerate for other traffics</li><li>• assertive radiotelephony communication</li></ul>



## Module 4.2 - CR SEA

## Section 5 - Abnormal and Emergency Procedures

spotting, assessing, and addressing emergencies or abnormal situations using the appropriate procedures, maintaining a safe flight throughout; decisions to discontinue the flight to ensure safety, if necessary

<b>Knowledge</b>	<ul style="list-style-type: none"><li>• emergency drills memory items</li><li>• understanding of all emergency and abnormal procedures</li><li>• precautionary landing methodology</li><li>• standard phraseology for emergency and abnormal situation</li><li>• transponder codes for emergency or com-loss situations</li><li>• priority setting tools (e.g. PPAA or FNCM)</li></ul>
<b>Skill</b>	<ul style="list-style-type: none"><li>• instrument scanning for advanced information of an impending issue</li><li>• timely execution of emergency drills memory items</li><li>• proper use of the applicable checklist</li><li>• ability to deal with a system failure according to the AFM</li><li>• situation assessment, decision and solution implementation</li></ul>
<b>Attitude</b>	<ul style="list-style-type: none"><li>• information gathering and problem solving</li><li>• informed decision making</li><li>• awareness of time or height availability and exhaustion</li><li>• informed decision making and effective implementation</li><li>• set priorities (Fly, Navigate, Communicate, Manage)</li></ul>

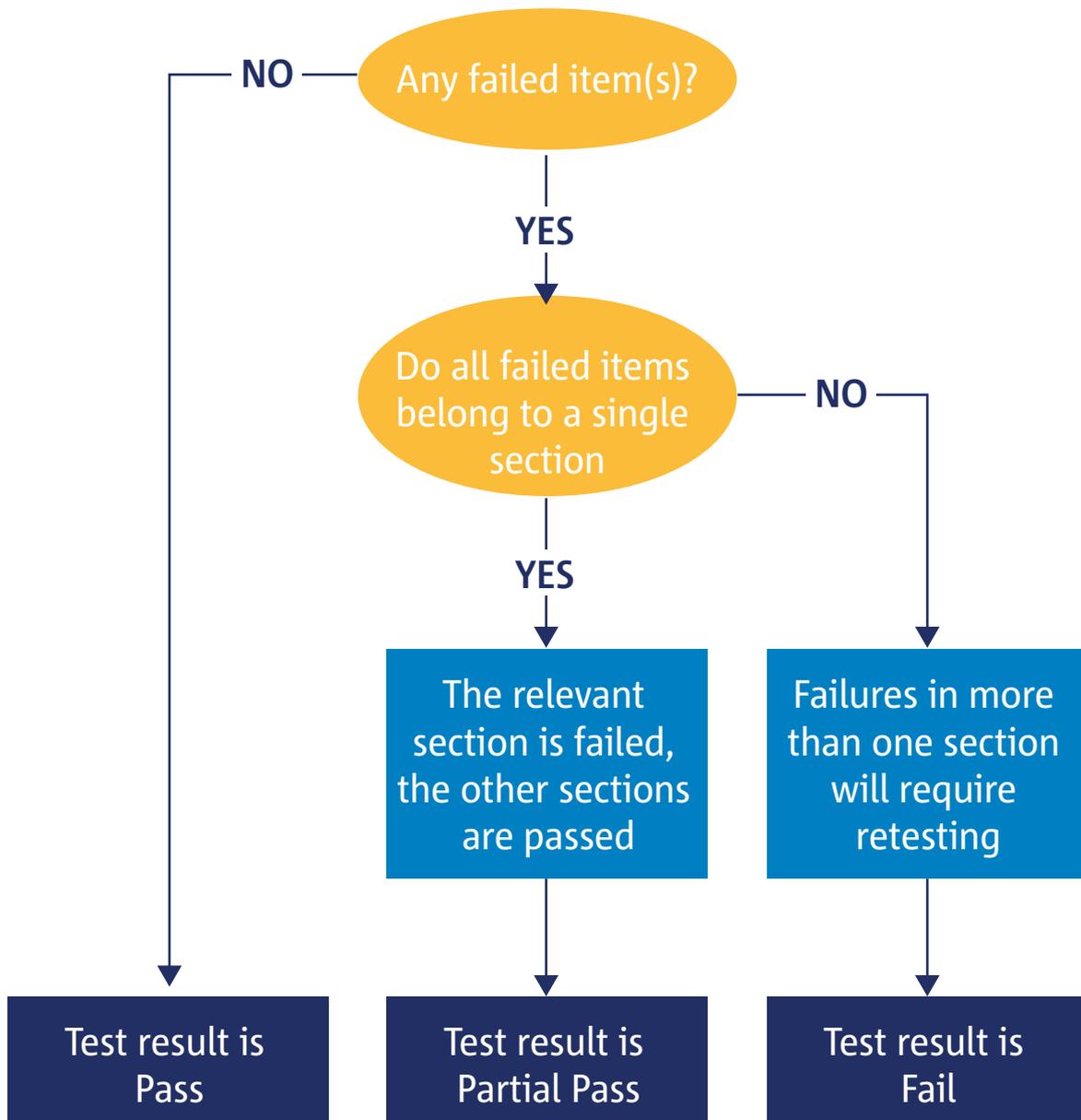
## Section 6 - Simulated Asymmetric Flight

safe asymmetric operation during and after engine failure; single-engine flight path management during take-off, climb, approach, landing, and go-around; performance limitation issues

<b>Knowledge</b>	<ul style="list-style-type: none"><li>• difference between single-engine controllability and performance</li><li>• understanding that performance is related to excess power available</li><li>• multi-engine specific speeds, relevance and markings (e.g. <math>V_{sse}</math>, <math>V_{xse}</math>, <math>V_{yse}</math>, <math>V_{mca}</math>)</li><li>• emergency drills memory items</li><li>• engine failure emergency procedure</li><li>• specific systems operation and limitations (e.g. pressurisation, anti/de-icing)</li></ul>
<b>Skill</b>	<ul style="list-style-type: none"><li>• maintain aircraft control, and establish a stable flight path, during and after engine failure-simulation</li><li>• timely execution of emergency drills memory items</li><li>• proper use of the applicable checklist</li><li>• adapt aircraft configuration for single-engine operation</li><li>• standard phraseology for emergency and abnormal situation (e.i single-engine situation)</li><li>• proper usage of specific aircraft systems (e.g. pressurisation, anti/de-icing)</li></ul>
<b>Attitude</b>	<ul style="list-style-type: none"><li>• appreciation for the performance limitation and adoption of a conservative planning approach</li><li>• assessment of the current situation under single-engine operation</li><li>• realistic and effective decision making</li><li>• anticipation and workload management</li></ul>



# 9. Decision Making Flow Chart





## 10. Test Debriefing

The debriefing should begin with the Examiner informing the Candidate the result of the test. After that, the Examiner should make use of a facilitated discussion and emphasise the relevant strengths and weaknesses demonstrated by the Candidate. If the test is failed, the Examiner shall inform the Candidate and the training organisation regarding any training requirements. The Candidate shall be explained their right of appeal, according to the procedures set by the Candidate's competent authority. With the agreement of the Candidate, the Examiner may allow, the responsible instructor, a Senior Examiner or an Inspector of the NAA, to take part in the debriefing.



# 11. Completion of all applicable records

All relevant records must be completed. Which includes, but is not limited to:

- Relevant operational documentation, ATS flight plan, aircraft logbook
- Skill test protocol and examiner report
  - 1 signed copy to the applicant
  - 1 copy to the candidate's competent authority
  - 1 copy to the examiner's competent authority
  - 1 copy for the examiner's records
- Candidate logbook

For any failed or partially failed test, the justification for failure must be printed on the examiner report. The ground for failure must be clear and motivated; a mere indication of which item was failed is not adequate nor sufficient. Any re-training recommendation should equally be written in the examiner report.