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Flight Examiner Manual

Module 3.3 – CPL (H)

CPL(H) Skill Test V2023.1

General Applicable Framework

Flight rules:	VFR
Operational rules:	Part-NCO/NCC
Crew concept:	SPO
Equipment:	Helicopter (items in section 4 a FSTD may be used)
Applicable type or class:	SEP, SET, MET
Required examiner certificate:	FE(H)

1. Introduction

The key privileges of a CPL(H) holder are to act as PIC under VFR in the helicopter type in which the Candidate has passed the skill test, respectively on which he is qualified. The holder is to act with remuneration in both non-commercial and commercial operations.

When conducting the skill test, the Examiner must have due regard for the experience that a CPL(H) Candidate may have. Nonetheless, the Examiner shall evaluate the ability by candidate to perform the procedures and manoeuvres described in the Appendix 4 (Part FCL) with a degree of competency appropriate to the privileges granted to the holder of a Commercial pilot licence.

2. Test Administration

The Examiner should provide the Candidate with advance information regarding the examination area and route to be flown. It should take into account weather forecasts and local restrictions (all low level and hover work shall be at an approved aerodrome/site), to afford the Candidate with sufficient time to prepare the navigation part of the skill test.

The test is intended to simulate a practical flight, flown single-pilot under VFR. The skill test may be conducted in 2 flights. The total duration of the flight(s) shall be at least 90 minutes and the destination shall be a controlled aerodrome. The navigation section scenario should have a duration and structure that allows the Candidate to demonstrate his ability to achieve all the required en-route procedures.

Usually, the Candidate shall be required to fly the aircraft from a position where the PIC functions can be performed and to carry out the test. The Examiner occupies the instructor seat and act as PIC. No other person, if not operationally or organisationally necessary for the conduct of the examination, should be allowed in the helicopter or simulator. Additionally, ATO limitations should be considered.

Before proceeding with the test, the Examiner shall verify that the prerequisites are met, including CPL(H) skill test recommendation; the ATO shall make available the training records for verification if requested. Accordingly, the following documents and conditions shall be verified:

- Passport or ID
- The Candidate is at least 18 years old
- Medical EASA Class 1
- Radiotelephony privileges and language proficiency requirements
- Successful completion of the CPL(H) theoretical exam within the last 36 months
- EASA Pilot logbook, showing the relevant minimum experience and flight instruction, as per Part-FCL Appendix 3
- Fulfils the Part-FCL type rating requirements for the helicopter used in the skill test
- Training completion certificate from the ATO
- Relevant CPL(H) skill test form filled, and endorsed by the ATO if applicable
- Aircraft documents
- Current navigation charts, and database if applicable
- Insurance of aircraft covering check flights
- Specific equipment for the flight part (e.g. sight-limiting device)

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 skill test
- Applicable weather minimum (e.g. Part-NCO, NAA, ATO, or test requirements)
- Examiner has PIC responsibility; the Candidate acts autonomously as if he was the PIC
- Handling of radio communications 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). Actual engine-shut-down and restart on multi-engines helicopter, if applicable
- 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 explicate the standards of completion laid down in subpart 7 of this module, 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 ATO as procedures and flight techniques might differ between organisations. 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
- Weather situation and forecast
- NOTAMs, including relevant local military restrictions, as applicable
- 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, including Part-CAT, and relevant specific national requirements)
- Licensing (e.g. CPL(H) privileges, ratings validity, currency requirements)
- Operational aspects
- Weather information and interpretation
- Airspace structure and limitations
- Aircraft systems, limitations, performance, mass and balance
- Flight planning
- Navigation charts
- Emergency procedures

6. Skill Test Items Appendix 4

Use of helicopter checklists, airmanship, control of helicopter by external visual reference, anti-icing procedures, and principles of threat and error management apply in all sections

Items in section 4 may be performed in a helicopter FNPT or a helicopter FFS.

The mandated skill test items are stated in the left column. Expanded guidance and additional explanations are provided in the right column.

Section 1 - Pre-flight or Post-flight Checks and Procedures		
a	**Helicopter knowledge (e.g. technical log, fuel, mass and balance, performance), flight planning documentation, NOTAM, and weather**	• *check all documents required for a NCO/NCC operation are correct* • *obtain and assess all elements of the prevailing and forecast weather conditions* • *obtain and assess all aeronautical information and NOTAMS* • *complete an appropriate flight navigation log and chart* • *determine that the helicopter is correctly fuelled for the flight* • *complete mass and balance calculation.* • *calculate helicopter performance criteria and limitations applicable to runway / helipad and forecast weather conditions and make adjustments if required for actual conditions before take-off.* • *Demonstrate use of the appropriate manufacturer's approved performance charts, tables and data.*
b	**Pre-flight inspection or action, location of parts and purpose.**	• *perform all elements of the helicopter pre-flight inspections as detailed* • *confirm that the helicopter is in a serviceable and safe condition for flight.* • *check helicopter serviceability record and technical log*
c	**Cockpit inspection, starting procedure**	• *complete an appropriate safety passenger procedure briefing for the Examiner* • *perform all the check elements in accordance with the flight manual or the authorised checklist or pilot operating handbook.* • *Use of the MEL (if applicable)* • *complete all recommended engine starting and after starting procedures*
d	**Communication and navigation equipment checks, selecting and setting frequencies.**	• *perform all the communication including the radio and navigation tuning of radio and navigation aid facilities* • *demonstrate standard R/T procedures and phraseology* • *follow ATC instructions.*
e	**Pre-take-off procedure, R/T procedure and ATC liaison-compliance**	• *complete all recommended pre-take-off checks and procedures* • *perform the take-off briefing* • *complete passenger and crew brief, as necessary* • *obtain ATC departure clearance and comply with ATC instructions*
f	**Parking, shutdown and post-flight procedure**	• *comply with airport markings and signals* • *properly position the helicopter considering other aircraft, wind and surface conditions* • *complete all shutdown checks and procedures* • *post flight inspection* • *helicopter securing* • *complete all necessary documentation*

Section 2 - Hover Manoeuvres, Advanced Handling and Confined Areas		
a	**Take-off and landing (lift off and touch down)**	• *complete the appropriate checklist* • *maintain power plant and rotor RPM within normal limits* • *descend vertically to within 4 feet of the designated touchdown point* • *divide attention inside and outside the helicopter* • *avoid runway incursions and/or ensure no conflict with traffic prior to take-off*
b	**Taxi and hover taxi**	• *perform a brake check immediately after the helicopter begins moving* • *properly use cyclic, collective, and brakes as applicable to control speed while taxiing* • *use an airport diagram or taxi chart during taxi, if published* • *comply with airport/heliport taxiway markings, lights, signals* • *hover taxi over specified ground references, demonstrating forward, sideward, and rearward hovering and hovering turns* • *when hover taxi maintain a ground track of a designated reference legs*
c	**Stationary hover with head, cross and tail wind**	• *maintain position of a designated point with no aft movement in tailwind and crosswind conditions*
d	**Stationary hover turns, 360° left and right (spot turns)**	• *perform a 360° spot turns, stopping or landing within 10° of specified headings* • *maintain a constant rate of turn at pivot points*
e	**Forward, sideways and backwards hover manoeuvring**	• *hover taxi over specified ground references, demonstrating forward, sideward, and rearward hovering and hovering turns* • *maintain positive control of the helicopter during hover operations*
f	**Simulated engine failure from the hover**	• *select a suitable surface for a safe touchdown* • *select a safe hovering altitude of at least 2-3 feet* • *react appropriately to the simulated powerplant failure.* • *Smoothly apply proper flight control inputs to stop the yaw and touchdown with minimum sideward movement with no rearward movement*

g	Quick stops into and downwind	• *properly coordinate all controls throughout the execution of the maneuver to terminate in a hover at an appropriate hover height* • *maintain an altitude that will permit safe clearance between the tail boom and the surface*
h	Sloping ground or unprepared sites landings and take-offs	• *select a suitable slope* • *make a smooth positive descent to touch the upslope skid on the sloping surface* • *recognize if slope is too steep and abandon the operation prior to reaching cyclic control stops* • *neutralize controls after landing* • *make a smooth transition from the slope to a stabilized hover parallel to the slope*
i	Take-offs (various profiles)	• *perform the approved/recommended take-off profiles* • *ensure a safe climb and use correct lookout techniques* • *complete all necessary after take-off checks*
j	Crosswind and downwind take-off (if practicable)	• *maintain proper ground track with crosswind correction throughout the take-off*
k	Take-off at maximum take-off mass (actual or simulated)	• *utilize the take-off power as specified/limited by the examiner .*
l	Approaches (various profiles)	• *complete the appropriate checklist* • *consider the wind, landing surface, and obstructions and select a suitable point* • *perform the approved/recommended approach profiles*
m	Limited power take-off and landing	• *demonstrate a hover power check, from which the examiner will set a simulated power limit to be used for the take-off* • *demonstrate an in-flight power check, from which the examiner will set a simulated power limit to be used for the approach and landing* • *demonstrate an appropriate technique for the approach and landing using the simulated power limit set by the examiner*

n	**Autorotations (FE to select two items from the following: basic, range, low speed, and 360° utrns)**	• *complete the appropriate checklist* • *select a suitable touchdown area and appropriate entry altitude* • *establish power off glide with the helicopter trimmed and autorotation airspeed* • *roll out of the turn to align the helicopter with the selected landing area no lower than 300 feet AGL at the recommended IAS* • *maintain rotor RPM within normal limits*
o	**Autorotative landing [Engine-off landings (EOL)]**	• *apply the appropriate flare at suitable height for helicopter/ environmental conditions (between 40 and 200 ft depending on helicopter type)* • *level fuselage attitude at approximately 8 to 15 feet AGL, cushion the touchdown, with a running landing if appropriate, whilst maintaining heading* • *carefully lower the collective*
p	**Practice forced landing with power recovery**	• *choose a suitable landing area with due regard for landing surface, surroundings and wind velocity* • *plan descent to achieve a safe approach to chosen landing area such that a safe landing would be assured* • *adjust the autorotative profile, as appropriate* • *demonstrate engine control for recovery from autorotation* • *terminate autorotation to a stabilized hover at the recommended hovering altitude or to the surface in a safe area, as appropriate*
q	**Power checks, reconnaissance technique, approach and departure technique**	• *accomplish a proper high and low reconnaissance of the confined landing area* • *select a suitable approach path, termination point, and departure path* • *continually evaluate the suitability of the confined landing area and/ or termination point.* • *accomplish a proper ground reconnaissance*

Section 3 - Navigation and En-Route Procedures		
a	**Navigation and orientation at various altitudes or heights and map reading**	• *complete all elements of VFR planning for the route prescribed with particular reference to planned altitudes and safe levels of operation* • *identify position visually by reference to ground features and map* • *appropriate use of a moving map systems, in complement with the classical way of navigation (if available)* • *application of airspace infringement prevention*
b	**Altitude / height, speed, heading control, observation of airspace and altimeter setting**	• *control aeroplane using visual attitude flying techniques* • *maintain the heading height and speed as computed in navigation log or advised to the Examiner within the prescribed limits* • *collision avoidance, maintain awareness of surrounding terrain, obstacles and restricted airspaces* • *use of ADS-B (if equipped)*
c	**Monitoring of flight progress, flight-log, fuel usage, endurance, ETA, assessment of track error and re-establishment of correct track, instrument monitoring**	• *navigate by means of calculated headings, ground speed and time* • *achieve destinations or turning points within 3 minutes of ETA* • *maintain the heading, altitude and speed as computed in navigation log or advised to the Examiner within the prescribed limits*
d	**Observation of weather conditions and diversion planning**	• *calculate heading, ground speed, ETA and fuel required during any unscheduled diversion* • *calculate Safety Altitude for track to new destination* • *maintain a navigation log to monitor flight progress and fuel situation*
e	**Tracking, positioning (NDB and/or VOR), identification of facilities**	• *select and identify the appropriate radio and navigation aids as required or nominated by the examiner determine position using the navigation system* • *Intercept and track a given course, radial, or bearing, as appropriate.* • *recognize signal loss and take appropriate action* • *correct track error through suitable heading adjustment* • *use proper communication procedures when utilizing radar services*
f	**ATC liaison with due observance of regulations, etc.**	• *set and cross check altimeters to local QNH or Standard pressure setting, as appropriate* • *maintain two way R/T communication using correct phraseology throughout* • *obtain ATC clearances or flight information, as appropriate* • *comply with ATC clearances and instructions when required*

Section 4 - Flight procedures and manoeuvres by sole reference to instruments		
a	**Level flight, control of heading, altitude / height and speed**	• *demonstrate control of heading, altitude and airspeed in straight and level flight by visual attitudes while maintaining a correct lookout technique* • *demonstrate correct use of trim, if applicable*
b	**Rate 1 level turns onto specified headings, 180°to 360°left and right**	• *establish Rate-1 turns and roll out onto nominated headings* • *demonstrate coordinated control of the helicopter's altitude, speed, and rate of turn using instrument-scanning techniques*
c	**Climbing and descending, including turns at rate 1 onto specified headings**	• *maintain directional control and balance throughout* • *complete all necessary climb checks* • *turn onto given headings maintaining balance and speed and bank angle* • *maintain lookout throughout* • *return aircraft to straight and level flight in cruise configuration at nominated level/ altitude* • *complete all necessary drills and checks*
d	**Recovery from unusual attitudes**	• *Interpretation of the instrument displays to identify 3D position* • *Application of the correct recovery technique.*
e	**Turns with 30° bank, turning up to 90° left and right**	• *demonstrate the correct lookout technique before, during and after turns* • *establish and maintain throughout the turn the nominated altitude and speed* • *co-ordinate the entry to turns to achieve 30° bank* • *co-ordinate the recovery from turns to straight and level flight on the specified heading or as appropriate without loss/gain of height*

Section 5 - Abnormal and Emergency Procedures (Simulated Where Appropriate)		
Note #1: Where the test is conducted on an ME helicopter, a simulated engine failure drill, including an SE approach and landing should be included in the test. *Note #2: The FE selects 4 items from the following:*		
a	**Engine malfunctions, including governor failure, carburettor or engine icing and oil system, as appropriate**	• *analyse emergency or abnormal situation and formulate appropriate plan* • *execute abnormal or emergency drills* • *enable helicopter power-plant governor and confirm operation* • *choose a suitable landing area with due regard for landing surface, surroundings and wind velocity*
b	**Fuel system malfunction**	• *execute abnormal or emergency drills*
c	**Electrical system malfunction**	• *execute abnormal or emergency drills*
d	**Hydraulic system malfunction, including approach and landing without hydraulics, as applicable**	• *execute abnormal or emergency drills*
e	**Main rotor or anti-torque system malfunction (FFS or discussion only)**	• *execute abnormal or emergency drills* • *Tail rotor drive failure (FFS or oral)* • *Tail rotor control failure: choose a suitable landing area with due regard for landing surface and wind velocity. Perform a landing or a low-hover taxing according to the landing surface, skid protections, and manufacturer limitations.*
f	**Fire drills, including smoke control and removal, as applicable**	• *execute abnormal or emergency drills* • *explain how PIC respond to an emergency suspected of involving lithium batteries contained into PEDs (if applicable)*

g	**Other abnormal and emergency procedures as outlined in appropriate flight manual, including for multi-engine helicopters:** **Simulated engine failure at take-off:** • **rejected take-off at or before TDP or safe forced landing at or before DPATO,** • **Continue TO shortly after TDP or DPATO.** **Landing with simulated engine failure;** • **landing or go-around following engine failure before LDP or DPBL, following engine failure after LDP or safe forced landing after DPBL.**	• *demonstrate knowledge of maintaining, operating, emergency handling and limitations of the aeroplane used for the skill test* • *pilot attitudes toward aircraft system management* • *correctly identify any situation requiring an aborted take-off* • *demonstrate adequate knowledge of the technique and procedure for accomplishing a rejected take-off after power-plant/system(s) failure/warnings, including related safety factors* • *demonstrate (SE helicopter) adequate skill in aborting the take-off and safely terminate at a hover or on the ground.* • *select (ME helicopter) the appropriate CAT A departure / approach landing profile or as directed by the examiner* ➤ *perform rejected take-off manoeuvres at or before the TDP / DPATO point i.a.w OEM recommended procedure* ➤ *perform continued take-off manoeuvres at or after the TDP / DPATO point i.a.w OEM recommended procedure* ➤ *perform baulked / rejected landing manoeuvres at or before the LDP or DPBL point i.a.w OEM recommended procedure* ➤ *perform OEI landing manoeuvres at or after the LDP or DPBL point i.a.w OEM recommended procedure*

7. Standard of Completion

To pass the CPL(H) Skill Test, the Candidate shall demonstrate the ability to:

a recognize and manage threats and errors;

b operate the helicopter within its limitations;

c complete all manoeuvres with smoothness and accuracy;

d exercise good judgment and airmanship; that is, to consistently use good judgement and well-developed knowledge, skills and attitudes to accomplish flight objectives;

e apply aeronautical knowledge;

f maintain control of the helicopter at all times in such a manner that the successful outcome of a procedure or manoeuvre is never seriously in doubt;

g 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 helicopter used:

Height	
I. normal forward flight	± 100 ft.
II. with simulated major emergency	± 150 ft.
III. Tracking on radio aids	± 10 ft.
Heading	
I. normal flight	± 10°
II. with simulated major emergency	± 15°
Speed	
I. take-off and approach multi-engine	± 5 knots
II. all other flight regimes	± 15 knots
Ground drift	
I. T.O. hover I.G.E.	± 3 ft.
II. landing	no sideways or backward movement

Compared to requirement (b) and (g), completion standards (a) to (f) 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 - Pre-flight or Post-flight Checks and Procedures

Planning, preparation and conduct of a safe and compliant flight, including the usage of TEM. Safe and compliant usage of the aircraft.

Knowledge

- applicable regulations (rules of the air, operational, licensing)
- weather information including METAR, TAF and Area Forecast, synoptic chart and wind charts;
- NOTAMs interpretation and understanding
- aircraft flight manual structure, relevant information usage
- aeronautical navigation charts interpretation and usage
- radio communication procedures and standard phraseology
- mass-and-balance limitations and computation of centre of gravity
- flight performance
- helicopter technical log
- fuelling and fuel checks

Skill

- obtain and assess all elements of the prevailing flight preparation information
- complete an appropriate flight navigation log and chart
- complete a mass-and-balance form
- complete helicopter documentation and explain documents requirements for the flight
- searching in official reference documents (e.g. ,RFM, POH, AIP)
- complete all recommended cockpit inspection, engine/rotor starting and post flight procedures by using an approved checklist
- calculate helicopter performance criteria and limitations applicable to the forecast weather conditions and make adjustments as required for actual conditions before take-off
- return the helicopter to the parking area and complete engine shutdown
- secure the helicopter and complete the documentation

Attitude

Situation awareness:
- is aware of flight planning considerations affecting all phases of the flight
- identifies potential problems during this phase, and knows how to react

Workload management:
- allocates appropriate time to the planning and helicopter pre-flight check.
- completes all required tasks at the appropriate time
- divides attention appropriately inside and outside the cockpit

Communication:
- ensures a passenger briefing is made at an appropriate time
- communicates with other agencies including ATC, when and where appropriate

Leadership and teamwork:
- interacts with all parties responsible for helicopter availability and dispatch.

Problem-solving and decision-making:
- makes a competent 'GO/NO GO' decision
- identifies possible defects and threats and takes corrective action

Section 2 - Hover Manoeuvres, Advanced Handling and Confined Areas

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

Knowledge

- wind/ground speed limitations for hover manoeuvres
- height/velocity envelope limitations
- wind limitations for crosswind and tailwind conditions
- effects of crosswind and tailwind on helicopter attitude
- RRPM and engine / torque limitations
- yaw-rate limitations
- approved/recommended take-off profiles
- recommended climb speeds
- approved/recommended approach profiles
- recommended approach speeds
- RRPM limitations for autorotation
- approved techniques for running take-offs and landings
- sloping ground limitations;
- causes of dynamic rollover and preventative techniques.
- emergency operating procedures relating to engine failure
- throttle control techniques

Skill

- complete all necessary checks and drills throughout
- lift in order to establish a stable hover maintaining ground position and heading
- maintain heading, height, and ground position whilst in the stationary hover into crosswind, and downwind included
- complete a backwards manoeuvre preceded by a lookout turn and an increase in the hover height
- descend in order to land maintaining ground position and heading
- maintain directional control and balance throughout
- obtain ATC clearance, when required
- demonstrate take-off/transition from the hover as detailed by the examiner
- take-off in crosswind/downwind from the hover as detailed by the examiner
- demonstrate an approach profile nominated by the examiner
- identify a landing area on slope and conduct reconnaissance
- conduct power check, noting power available
- stop the tendency to yaw, drift and roll (simulated engine failure)
- cushion the touchdown (simulated engine failure)

Attitude

Situation awareness
- maintains adequate lookout throughout
- assesses environmental conditions
- demonstrates orientation throughout the manoeuvre
- awareness of conflicting traffic movements
- awareness of Loss of Tail rotor Effectiveness (LTE)
- awareness of proximity of main and tail rotors relative to sloping ground
- awareness of dynamic rollover
- awareness of vortex ring state conditions

Workload management
- divides attention appropriately inside and outside the cockpit
- prioritises flying tasks, normal operating procedures and emergency procedures appropriately
- completes all required tasks at an appropriate time

Communication
- makes appropriate R/T call to ATC (simulated to the examiner)

Problem-solving and decision-making
- identifies possible threats and takes mitigatory action
- determines the appropriate technique for obstacle environment and available space
- termination of manoeuvre if unsafe conditions are recognised
- revises technique as required to make the intended landing site (autorotation)

Section 3 - Navigation and en-Route Procedures

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

Knowledge	• flight-planning methodology including relationship between wind velocity, IAS, ground speed, heading, and track • aeronautical navigation maps legend and charts interpretation • decoding of available weather information • altimeter-setting procedures • operational flight plan usage • on-board communication equipment use and limitation • use of instrumentation to reference desired radial/track • configuration of navigation displays including HSI, RMI, OBS, FD, and autopilot; • transponder-setting procedures • applicable regulation (airspace class, weather minima) • radiotelephony requirements, procedures, and applicable standard phraseology • pilot–controller responsibilities including tower, en-route control, and clearances; • adequate knowledge of two-way communications failure procedures • manual flying techniques with or without the use of autopilot as determined by the examiner
Skill	• control helicopter altitude, speed, and heading using visual attitude flying techniques • use the trim system, where appropriate • chart and ground reading (reconciliation of ground features and chart information) • identify the helicopter's position by visual reference to ground features and map(s)/chart(s) • maintain regular lookout using proper visual-scanning techniques • proficient usage of on-board communication equipment • navigate by means of precomputed headings, ground speed, and elapsed time • intercept and maintain given tracks or radials using the navigation aids nominated • conduct navigation instrument functional checks (if not already completed) • select and identify the appropriate radio and navigation aids as required or nominated by the examiner • correct track error through suitable heading adjustment • conduct regular checks for carburettor icing, if appropriate • communicate clearly, assertively, and in due time • monitor fuel consumption for range or endurance, making adjustments as appropriate • flight re-planning and diversion implementation

Attitude	Situation awareness: • demonstrates terrain awareness • awareness of conflicting traffic movements • assesses environmental conditions and its possible evolution, and proactively generating options • awareness of the helicopter's position in relation to external references Workload management • divides attention appropriately inside and outside the cockpit • arranges cockpit reference material to be available at the appropriate time • prioritises flying tasks and normal operating procedures to ensure timely completion Communication: • obtains appropriate ATC clearance, reads back correctly and when necessary, and requests clarification or change or assistance as necessary Problem-solving and decision-making: • recognises errors or system malfunctions, and takes timely and appropriate corrective action • set priorities (Fly, Navigate, Communicate, Manage) and manage workload • re-plans flight plan as necessary

Section 4 - Flight procedures and manoeuvres by sole reference to instruments

The applicant is able to maintain control of the helicopter in level flight by sole reference to instruments to complete a coordinated climb/descent and turn using the recommended climb or descent speed / rates of climb and descent. Maintain control of the helicopter whilst manoeuvring as required for the exercise by sole reference to instruments

Knowledge	• manual flying control techniques • flying control techniques using the autopilot functions as allowed by the examiner (if applicable) • speed–bank angle relationship for rate of turn (rate-1 turns included) • recommended climb/descent speeds and associated power settings
Skill	• demonstrate coordinated control of the helicopter altitude, angle of bank, speed, and heading using instrument scanning techniques • establish steep turns (with a 30-degree angle of bank) onto nominated headings whilst maintaining altitude/height and speed • establish Rate-1 turns and roll out onto nominated headings • use the trim system, where appropriate • maintain directional control and balance throughout • complete all the necessary checks and drills throughout
Attitude	Situation awareness: • demonstrates orientation throughout the manoeuvre • assesses environmental conditions • awareness of the helicopter's speed/height/power setting/RRPM Problem-solving and decision-making: • recognises errors and takes timely and appropriate corrective action

Section 5 - Abnormal and Emergency Procedures (Simulated Where Appropriate)

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

Knowledge

- abnormal and emergency operating procedures
- emergency drills memory items
- understanding of all emergency and abnormal procedures
- precautionary landing methodology
- standard phraseology for emergency and abnormal situation (e.g. Engine, Fuel, Electrical, Hydraulic, Rotor system and Fire drills including Smoke control / removal)
- transponder codes for emergency or com-loss situations
- priority setting tools (e.g. PPAA or FNCM)
- performance class operations
- calculate rejected or continued CAT A data take-off / landing distance

Skill

- instrument scanning for advanced information of an impending issue
- analyse emergency / abnormal situations and formulate appropriate plan
- timely execution of emergency drills memory items
- for main-rotor failure, commence emergency descent to land immediately;
- for anti-torque system failure (fixed pitch), establish a balanced flight and simulate a running landing
- for anti-torque system failure (loss of drive), enter autorotation immediately and recover with a power-off landing
- execute abnormal drills in accordance with the RFM or other appropriate document (touch drills only)
- respond to an emergency suspected of involving lithium batteries of a PEDs
- plan, execute, and demonstrate further actions to ensure safe recovery of helicopter and passengers
- use the checklist to confirm actions when time permits
- make suitable emergency R/T calls (given to the examiner but not transmitted)
- select (ME helicopter) the appropriate CAT A data departure / approach landing profile or as directed by the examiner

Attitude

Situation awareness:

- demonstrates terrain awareness
- awareness of conflicting traffic movements
- assesses environmental conditions
- awareness of the helicopter's speed/height/power setting / RRPM
- awareness of the helicopter systems' state
- awareness of the helicopter's position in relation to external references (landmarks / navigation aids).

Workload management:

- prioritises flying tasks, normal operating procedures, and emergency operating procedures appropriately (Fly, Navigate, Communicate, Manage)

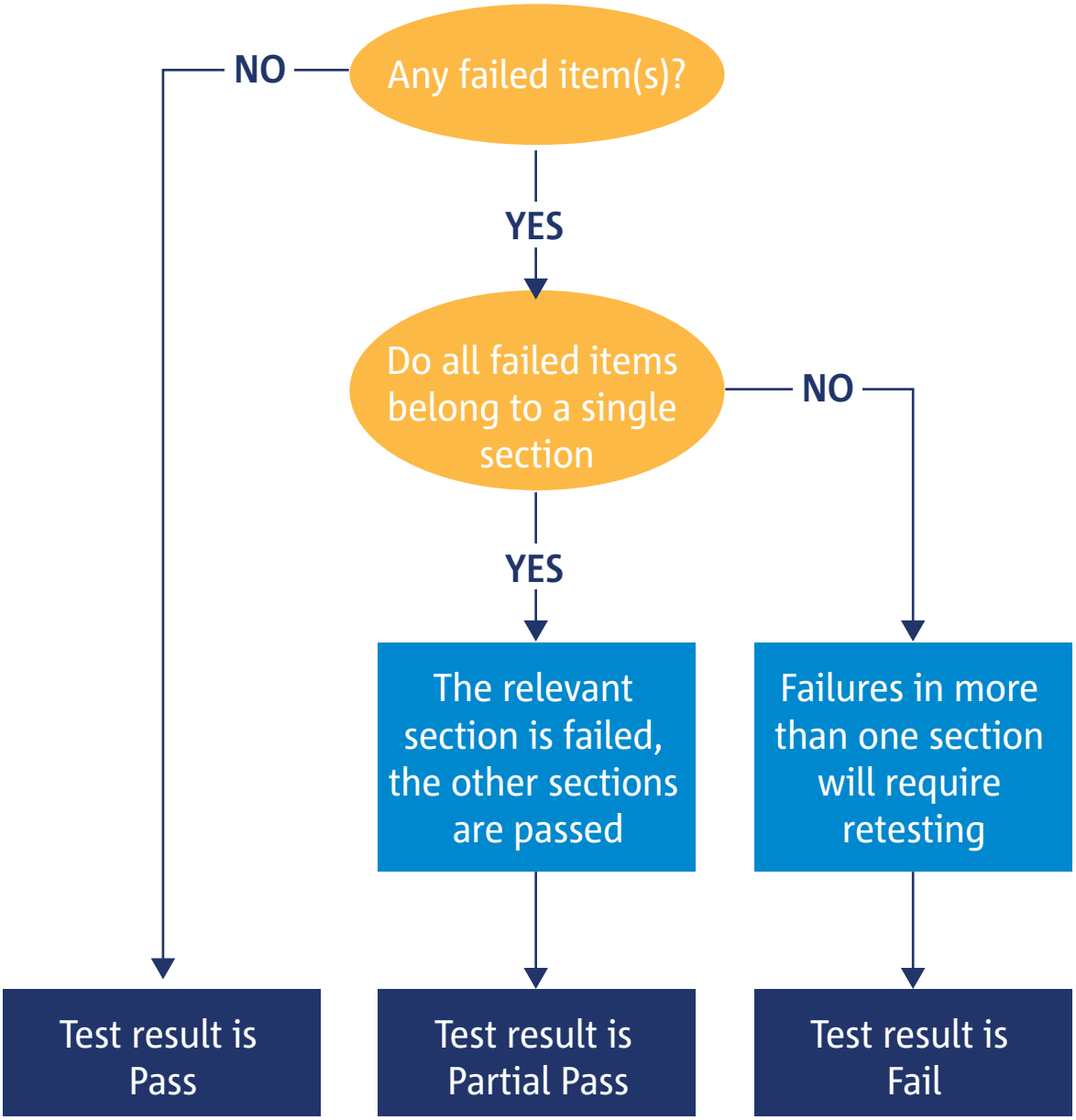
Communication:

- ensures that correct passenger and crew briefings are made
- informs ATC of situation in a timely manner and requests appropriate priority

Problem-solving and decision-making:

- recognises errors or system malfunctions, and takes timely and appropriate corrective action
- re-plans flight as necessary

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 recommendation. 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, aircraft logbook, closing ATS flight plan
- Skill test protocol and examiner report
  - ➤ original to the applicant, respectively as per the candidate's competent authority instructions
  - ➤ 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.

All relevant sections of the skill test shall be completed within 6 months. There is no limit to the number of skill tests that may be attempted

An applicant shall be required to fly the aircraft from a position where the PIC functions can be performed and to carry out the test as if no other crew member is present. Responsibility for the flight shall be allocated in accordance with national regulations.

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

The FE shall take no part in the operation of the aircraft except where intervention is necessary in the interests of safety or to avoid unacceptable delay to other traffic.