

L. SUBJECT 070 — OPERATIONAL PROCEDURES

| Syllabus reference | Syllabus details and associated Learning Objectives | Aeroplane | | Helicopter | | | IR |
|---------------------|---|-----------|-----|------------|------|-----|----|
| | | ATPL | CPL | ATPL/IR | ATPL | CPL | |
| 070 00 00 00 | OPERATIONAL PROCEDURES | | | | | | |
| 071 01 00 00 | GENERAL REQUIREMENTS | | | | | | |
| 071 01 01 00 | ICAO Annex 6 | | | | | | |
| 071 01 01 01 | Definitions | | | | | | |
| | LO Alternate aerodrome: take-off alternate, en route alternate, ETOPS en route alternate, destination alternate (ICAO Annex 6, Part I, Chapter 1). | x | x | | | | |
| | LO Alternate heliport (ICAO Annex 6, Part III, Section 1, Chapter 1). | | | x | x | x | |
| | LO Flight time — aeroplanes (ICAO Annex 6, Part I, Chapter 1). | x | x | | | | |
| | LO Flight time — helicopters (ICAO Annex 6, Part III, Section 1, Chapter 1). | | | x | x | x | |
| 071 01 01 02 | Applicability | | | | | | |
| | LO State that Part I shall be applicable to the operation of aeroplanes by operators authorised to conduct international commercial air transport operations (ICAO Annex 6, Part I, Chapter 2). | x | x | | | | |
| | LO State that Part III shall be applicable to all helicopters engaged in international commercial air transport operations or in international general aviation operations, except it is not applicable to helicopters engaged in aerial work (ICAO Annex 6, Part III, Section 1, Chapter 2). | | | x | x | x | |
| 071 01 01 03 | General | | | | | | |
| | LO State compliance with laws, regulations and procedures (ICAO Annex 6, Part I, Chapter 3.1/Part III, Section 2, Chapter 1.1). | x | x | x | x | x | |

L. SUBJECT 070 — OPERATIONAL PROCEDURES

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| LO | State accident prevention and flight safety programme (ICAO Annex 6, Part I, Chapter 3.2). | x | x | | | | |
| LO | State flight safety documents system (ICAO Annex 6, Part I, Chapter 3.3). | x | x | | | | |
| LO | State maintenance release (ICAO Annex 6, Part I, Chapter 8.8/Part III, Section 2, Chapter 6.7). | x | x | x | x | x | |
| LO | List and describe the lights to be displayed by aircraft (ICAO Annex 6, Part I, Appendix 1). | x | x | | | | |
| 071 01 02 00 | Operational requirements | | | | | | |
| 071 01 02 01 | Applicability | | | | | | |
| LO | State the operational regulations applicable to commercial air transportation. | x | x | x | x | x | |
| LO | Nature of operations and exceptions. | x | x | x | x | x | |
| 071 01 02 02 | General | | | | | | |
| LO | State that a commercial air transportation flight must meet the applicable operational requirements. | x | x | x | x | x | |
| LO | Flight Manual limitations — Flight through the Height Velocity (HV) envelope. | | | x | x | x | |
| LO | Define 'Helicopter Emergency Medical Service'. | | | x | x | x | |
| LO | Operations over a hostile environment — Applicability. | | | x | x | x | |
| LO | Local area operations — Approval. | | | x | x | x | |
| LO | State the requirements about language used for crew communication and operations manual. | x | x | x | x | x | |
| LO | Explain the relation between MMEL and MEL. | x | x | x | x | x | |
| LO | State the operator's requirements regarding a management system. | x | x | x | x | x | |

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| LO | State the operator's requirements regarding accident prevention and flight safety programme. | x | x | x | x | x | |
| LO | State the operator's responsibility regarding the distinction between cabin crew members and additional crew members. | x | x | | | | |
| LO | State the operations limitations regarding ditching requirements. | x | x | | | | |
| LO | State the regulations concerning the carriage of persons on an aircraft. | x | x | x | x | x | |
| LO | State the crew members' responsibilities in the execution of their duties, and define the commander's authority. | x | x | x | x | x | |
| LO | State the operator's and commander's responsibilities regarding admission to the flight deck and carriage of unauthorised persons or cargo. | x | x | x | x | x | |
| LO | State the operator's responsibility concerning portable electronic devices. | x | x | x | x | x | |
| LO | State the operator's responsibilities regarding admission in an aircraft of a person under the influence of drug or alcohol. | x | x | x | x | x | |
| LO | State the regulations concerning endangering safety. | x | x | x | x | x | |
| LO | List the documents to be carried on each flight. | x | x | x | x | x | |
| LO | State the operator's responsibility regarding manuals to be carried. | x | x | x | x | x | |
| LO | List the additional information and forms to be carried on board. | x | x | x | x | x | |
| LO | List the items of information to be retained on the ground by the operator. | x | x | x | x | x | |
| LO | State the operator's responsibility regarding inspections. | x | x | x | x | x | |

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| LO | State the responsibility of the operator and of the commander regarding the production of and access to records and documents. | x | x | x | x | x | |
| LO | State the operator's responsibility regarding the preservation of documentation and recordings, including recorders recordings. | x | x | x | x | x | |
| LO | Define the terms used in leasing and state the responsibility and requirements of each party in various cases. | x | x | x | x | x | |
| 071 01 02 03 | Operator certification and supervision | | | | | | |
| LO | State the requirement to be satisfied for the issue of an Air Operator's Certificate (AOC). | x | x | x | x | x | |
| LO | State the rules applicable to air operator certification. | x | x | x | x | x | |
| LO | State the conditions to be met for the issue or revalidation of an AOC. | x | x | x | x | x | |
| LO | Explain the contents and conditions of the AOC. | x | x | x | x | x | |
| 071 01 02 04 | Operational procedures (except long-range flight preparation) | | | | | | |
| LO | Define the terms used for operational procedures. | x | x | | | | |
| LO | State the operator's responsibilities regarding Operations Manual. | x | x | x | x | x | |
| LO | State the operator's responsibilities regarding competence of operations personnel. | x | x | x | x | x | |
| LO | State the operator's responsibilities regarding establishment of procedures. | x | x | x | x | x | |
| LO | State the operator's responsibilities regarding use of air traffic services. | x | x | x | x | x | |
| LO | State the operator's responsibilities regarding authorisation of aerodromes/heliports by the operator. | x | x | x | x | x | |

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| LO | Explain which elements must be considered by the operator when specifying aerodrome/heliport operating minima. | x | x | x | x | x | |
| LO | State the operator's responsibilities regarding departure and approach procedures. | x | x | x | x | x | |
| LO | State the parameters to be considered in noise-abatement procedures. | x | x | | | | |
| LO | State the elements to be considered regarding routes and areas of operation. | x | x | x | x | x | |
| LO | State the additional specific navigation-performance requirements. | x | x | x | x | x | |
| LO | State the maximum distance from an adequate aerodrome for two-engine aeroplanes without an ETOPS approval. | x | x | | | | |
| LO | State the requirement for alternate-airport accessibility check for ETOPS operations. | x | x | | | | |
| LO | List the factors to be considered when establishing minimum flight altitude. | x | x | x | x | x | |
| LO | Describe the components of the fuel policy. | x | x | x | x | x | |
| LO | State the requirements for carrying persons with reduced mobility. | x | x | x | x | x | |
| LO | State the operator's responsibilities for the carriage of inadmissible passengers, deportees or persons in custody. | x | x | x | x | x | |
| LO | State the requirements for the stowage of baggage and cargo in the passenger cabin. | x | x | x | x | x | |
| LO | State the requirements regarding passenger seating and emergency evacuation. | x | x | x | x | x | |
| LO | Detail the procedures for a passenger briefing in respect of emergency equipment and exits. | x | x | x | x | x | |
| LO | State the flight preparation forms to be completed before flight. | x | x | x | x | x | |

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| LO | State the commander's responsibilities during flight preparation. | x | x | x | x | x | |
| LO | State the rules for aerodromes/heliports selection (including ETOPS configuration). | x | x | x | x | x | |
| LO | Explain the planning minima for IFR flights. | x | | x | | | |
| LO | State the rules for refuelling/defuelling. | x | x | x | x | x | |
| LO | State 'crew members at station' policy. | x | x | x | x | x | |
| LO | State the use of seats, safety belts and harnesses. | x | x | x | x | x | |
| LO | State securing of passenger cabin and galley requirements. | x | x | x | x | x | |
| LO | State the commander's responsibility regarding smoking on board. | x | x | x | x | x | |
| LO | State under which conditions a commander can commence or continue a flight regarding meteorological conditions. | x | x | x | x | x | |
| LO | State the commander's responsibility regarding ice and other contaminants. | x | x | x | x | x | |
| LO | State the commander's responsibility regarding fuel to be carried and in-flight fuel management. | x | x | x | x | x | |
| LO | State the requirements regarding the use of supplemental oxygen. | x | x | x | x | x | |
| LO | State the ground-proximity detection reactions. | x | x | x | x | x | |
| LO | Explain the requirements for use of ACAS. | x | x | x | x | x | |
| LO | State the commander's responsibility regarding approach and landing. | x | x | x | x | x | |
| LO | State the circumstances under which a report shall be submitted. | x | x | x | x | x | |
| 071 01 02 05 | All-weather operations | | | | | | |
| LO | State the operator's responsibility regarding aerodrome/heliport operating minima. | x | | x | | | |

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| LO | List the parameters to be considered in establishing the aerodrome operating minima. | x | | x | | | |
| LO | Define the criteria to be taken into consideration for the classification of aeroplanes. | x | | | | | |
| LO | Define the following terms: 'circling', 'low-visibility procedures', 'low-visibility take-off', 'visual approach'. | x | | x | | | |
| LO | Define the following terms: 'flight control system', 'fail-passive flight control system', 'fail-operational flight control system', 'fail-operational hybrid landing system'. | x | | | | | |
| LO | Define the following terms: 'final approach and take-off area'. | | | x | | | |
| LO | State the general operating rules for low-visibility operations. | x | | x | | | |
| LO | Low-visibility operations — aerodrome/heliport considerations. | x | | x | | | |
| LO | State the training and qualification requirements for flight crew to conduct low-visibility operations. | x | | x | | | |
| LO | State the operating procedures for low-visibility operations. | x | | x | | | |
| LO | State the operator's and commander's responsibilities regarding minimum equipment for low-visibility operations. | x | | x | | | |
| LO | VFR operating minima. | x | | x | | | |
| LO | Aerodrome operating minima: state under which conditions the commander can commence take-off. | x | | x | | | |
| LO | Aerodrome operating minima: state that take-off minima are expressed as visibility or RVR. | x | | x | | | |

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| LO | Aerodrome operating minima: state the take-off RVR value depending on the facilities. | x | | x | | | |
| LO | Aerodrome operating minima: state the system minima for non-precision approach. | x | | x | | | |
| LO | Aerodrome operating minima: state under which conditions a pilot can continue the approach below MDA/H or DA/H. | x | | x | | | |
| LO | Aerodrome operating minima: state the lowest minima for precision approach category 1 (including single-pilot operations). | x | | x | | | |
| LO | Aerodrome operating minima: state the lowest minima for precision approach category 2 operations. | x | | x | | | |
| LO | Aerodrome operating minima: state the lowest minima for precision approach category 3 operations. | x | | | | | |
| LO | Aerodrome operating minima: state the lowest minima for circling and visual approach. | x | | x | | | |
| LO | Aerodrome operating minima: state the RVR value and cloud ceiling depending on the facilities (class 1, 2 and 3). | | | x | | | |
| LO | Aerodrome operating minima: state under which conditions an airborne radar approach can be performed and state the relevant minima. | | | x | | | |
| 071 01 02 06 | Instruments and equipment | | | | | | |
| LO | State which items do not require an equipment approval. | x | x | x | x | x | |
| LO | State the requirements regarding spare-fuses availability. | x | x | | | | |
| LO | State the requirements regarding operating lights. | x | x | x | x | x | |

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| LO | State the requirements regarding windshield wipers. | x | x | | | | |
| LO | List the equipment for operations requiring a radio communication. | | | x | x | x | |
| LO | List the equipment for operations requiring a radio-navigation system. | | | x | x | x | |
| LO | List the minimum equipment required for day and night VFR flights. | x | x | x | x | x | |
| LO | List the minimum equipment required for IFR flights. | x | | x | | | |
| LO | State the required equipment for single-pilot operation under IFR. | x | | x | | | |
| LO | State the requirements for an altitude alert system. | x | x | | | | |
| LO | State the requirements for radio altimeters. | | | x | x | x | |
| LO | State the requirements for GPWS/TAWS. | x | x | | | | |
| LO | State the requirements for ACAS. | x | x | | | | |
| LO | State the conditions under which an aircraft must be fitted with a weather radar. | x | x | x | x | x | |
| LO | State the requirements for operations in icing conditions. | x | x | x | x | x | |
| LO | State the conditions under which a crew member interphone system and public address system are mandatory. | x | x | x | x | x | |
| LO | State the circumstances under which a cockpit voice recorder is compulsory. | x | x | x | x | x | |
| LO | State the rules regarding the location, construction, installation and operation of cockpit voice recorders. | x | x | x | x | x | |
| LO | State the circumstances under which a flight data recorder is compulsory. | x | x | x | x | x | |
| LO | State the rules regarding the location, construction, installation and operation of flight data recorders. | x | x | x | x | x | |

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| | | ATPL | CPL | ATPL/IR | ATPL | CPL | |
| LO | State the requirements about seats, seat safety belts, harnesses and child-restraint devices. | X | X | X | X | X | |
| LO | State the requirements about 'Fasten seat belt' and 'No smoking' signs. | X | X | X | X | X | |
| LO | State the requirements regarding internal doors and curtains. | X | X | | | | |
| LO | State the requirements regarding first-aid kits. | X | X | X | X | X | |
| LO | State the requirements regarding emergency medical kits and first-aid oxygen. | X | X | | | | |
| LO | Detail the rules regarding the carriage and use of supplemental oxygen for passengers and crew. | X | X | X | X | X | |
| LO | Detail the rules regarding crew-protective breathing equipment. | X | X | | | | |
| LO | Describe the minimum number, type and location of handheld fire extinguishers. | X | X | X | X | X | |
| LO | Describe the minimum number and location of crash axes and crowbars. | X | X | | | | |
| LO | Specify the colours and markings used to indicate break-in points. | X | X | X | X | X | |
| LO | State the requirements for means of emergency evacuation. | X | X | | | | |
| LO | State the requirements for megaphones. | X | X | X | X | X | |
| LO | State the requirements for emergency lighting. | X | X | X | X | X | |
| LO | State the requirements for an emergency locator transmitter. | X | X | X | X | X | |
| LO | State the requirements for life jackets, life rafts, survival kits and ELTs. | X | X | X | X | X | |
| LO | State the requirements for crew survival suit. | | | X | X | X | |

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| LO | State the requirements for survival equipment. | x | x | x | x | x | |
| LO | State the additional requirements for helicopters operating to or from helidecks located in a hostile sea area. | | | x | x | x | |
| LO | State the requirements for an emergency flotation equipment. | | | x | x | x | |
| 071 01 02 07 | Communication and navigation equipment | | | | | | |
| LO | Explain the general requirements for communication and navigation equipment. | x | x | x | x | x | |
| LO | State that the radio-communication equipment must provide communications on 121.5 MHz. | x | x | x | x | x | |
| LO | State the requirements regarding the provision of an audio selector panel. | x | x | x | x | x | |
| LO | List the requirements for radio equipment when flying under VFR by reference to visual landmarks. | x | x | x | x | x | |
| LO | List the requirements for communications and navigation equipment when operating under IFR or under VFR over routes not navigated by reference to visual landmarks. | x | x | x | x | x | |
| LO | State the equipment required to operate within RVSM airspace. | x | x | | | | |
| 071 01 02 09 | Flight crew | | | | | | |
| LO | State the requirement regarding crew composition and in-flight relief. | x | x | x | x | x | |
| LO | State the requirement for conversion training and checking. | x | x | x | x | x | |
| LO | State the requirement for differences training and familiarisation training. | x | x | x | x | x | |
| LO | State the conditions for upgrade from co-pilot to commander. | x | x | x | x | x | |
| LO | State the minimum qualification requirements to operate as a commander. | x | x | x | x | x | |

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| LO | State the requirement for recurrent training and checking. | x | x | x | x | x | |
| LO | State the requirement for a pilot to operate on either pilot's seat. | x | x | x | x | x | |
| LO | State the minimum recent experience for the commander and the co-pilot. | x | x | x | x | x | |
| LO | Specify the route and aerodrome/ heliport qualification required for a commander or a pilot flying. | x | x | x | x | x | |
| LO | State the requirement to operate on more than one type or variant. | x | x | x | x | x | |
| LO | State that when a flight crew member operates both helicopters and aeroplanes, the operations are limited to one type of each. | x | x | | | | |
| LO | State the training records requirement. | x | x | x | x | x | |
| 071 01 02 10 | Cabin crew/crew members other than flight crew | | | | | | |
| LO | State who is regarded as a cabin crew member. | x | x | x | x | x | |
| LO | Detail the requirements regarding cabin crew members. | x | x | x | x | x | |
| LO | State the acceptability criteria. | x | x | x | x | x | |
| LO | State the requirements regarding senior cabin crew members. | x | x | x | x | x | |
| LO | State the conditions to operate on more than one type or variant. | x | x | x | x | x | |
| 071 01 02 11 | Manuals, logs and records | | | | | | |
| LO | Explain the general rules for the operations manual. | x | x | x | x | x | |
| LO | Explain the structure and subject headings of the operations manual. | x | x | x | x | x | |
| LO | State the requirements for a journey logbook. | x | x | x | x | x | |
| LO | Describe the requirements regarding the operational flight plan. | x | x | x | x | x | |

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| LO | State the requirements for document-storage periods. | x | x | x | x | x | |
| 071 01 02 12 | Flight and duty-time limitations and rest requirements | | | | | | |
| LO | Explain the definitions used for flight-time regulation. | x | x | | | | |
| LO | State the flight and duty limitations. | x | x | | | | |
| LO | State the requirements regarding the maximum daily flight-duty period. | x | x | | | | |
| LO | State the requirements regarding rest periods. | x | x | | | | |
| LO | Explain the possible extension of flight-duty period due to in-flight rest. | x | x | | | | |
| LO | Explain the captain's discretion in case of unforeseen circumstances in actual flight operations. | x | x | | | | |
| LO | Explain the regulation regarding standby. | x | X | | | | |
| LO | State the requirements regarding flight-duty, duty and rest-period records. | x | x | | | | |
| 071 01 02 13 | Transport of dangerous goods by air | | | | | | |
| LO | Explain the terminology relevant to dangerous goods. | x | x | x | x | X | |
| LO | Explain the scope of the regulation. | x | x | x | x | x | |
| LO | Explain the limitations on the transport of dangerous goods. | x | x | x | x | x | |
| LO | State the requirements for the acceptance of dangerous goods. | x | x | x | x | x | |
| LO | State the requirements regarding inspection for damage, leakage or contamination. | x | x | x | x | x | |
| LO | Explain the loading restrictions. | x | x | x | x | x | |
| LO | State the requirement for provision of information to the crew. | x | x | x | x | x | |

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| LO | Explain the requirements for dangerous goods incident and accident reports. | x | x | x | x | x | |
| 071 01 03 00 | Long-range flights | | | | | | |
| 071 01 03 01 | Flight management | | | | | | |
| LO | Navigation-planning procedures: <ul style="list-style-type: none"> — describe the operator’s responsibilities concerning ETOPS routes; — list the factors to be considered by the commander before commencing the flight. | x | | | | | |
| LO | Selection of a route: <ul style="list-style-type: none"> — describe the meaning of the term ‘adequate aerodrome’; — describe the limitations on extended-range operations with two-engine aeroplanes with and without ETOPS approval. | x | | | | | |
| LO | Selection of cruising altitude (MNPSA Manual Chapter 4): <ul style="list-style-type: none"> — specify the appropriate cruising levels for normal long-range IFR flights and for those operating on the North Atlantic Operational Track Structure. | x | | | | | |
| LO | Selection of alternate aerodrome: <ul style="list-style-type: none"> — state the circumstances in which a take-off alternate must be selected; — state the maximum flight distance of a take-off alternate for: two-engine aeroplane, ETOPS-approved aeroplane, three or four-engine aeroplane; — state the factors to be considered in the selection of a take-off alternate; — state when a destination alternate need not be selected; — state when two destination alternates must be selected; — state the factors to be considered in the selection of a destination alternate aerodrome; — state the factors to be considered in the selection of an en route alternate aerodrome. | x | | | | | |

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| LO | Minimum time routes: — define, construct and interpret minimum time route (route giving the shortest flight time from departure to destination adhering to all ATC and airspace restrictions). | x | | | | | |

| 071 01 03 02 | Transoceanic and polar flight | | | | | | |
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| LO | (ICAO Doc 7030) <ul style="list-style-type: none"> — Describe the possible indications of navigation-system degradation. — Describe by what emergency means course and INS can be cross-checked in the case of: three navigation systems, two navigation systems. — Interpret VOR, NDB, VOR/DME information to calculate aircraft position and aircraft course. — Describe the general ICAO procedures applicable in North Atlantic airspace (NAT) if the aircraft is unable to continue the flight in accordance with its air traffic control clearance. — Describe the ICAO procedures applicable in North Atlantic Airspace (NAT) in case of radio-communication failure. — Describe the recommended initial action if an aircraft is unable to obtain a revised air traffic control clearance. — Describe the subsequent action for: aircraft able to maintain assigned flight level, and aircraft unable to maintain assigned flight level. — Describe determination of tracks and courses for random routes in NAT. — Specify the method by which planned tracks are defined (by latitude and longitude) in the NAT region: when operating predominately in an east–west direction south of 70°N, when operating predominately in an east–west direction north of 70°N. — State the maximum flight time recommended between significant points. — Specify the method by which planned tracks are defined for flights operating predominantly in a north–south direction. — Describe how the desired route must be specified in the air traffic control flight plan. | x | | | | | |

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| LO | <p>Polar navigation</p> <p><i>Terrestrial magnetism characteristics in polar zones</i></p> <ul style="list-style-type: none"> — Explain why magnetic compasses become unreliable or useless in polar zones. — State in which area VORs are referenced to the true north. <p><i>Specific problems of polar navigation</i></p> <ul style="list-style-type: none"> — Describe the general problems of polar navigation. — Describe what precautions can be taken when operating in the area of compass unreliability as a contingency against INS failure. — Describe how grid navigation can be used in conjunction with a Directional Gyro (DG) in polar areas. — Use polar stereographic chart and grid coordinates to solve polar navigation problems. — Use polar stereographic chart and grid coordinates to calculate navigation data. — Use INS information to solve polar navigation problems. — Define, calculate: transport precession, Earth-rate (astronomic) precession, convergence factor. — Describe the effect of using a free gyro to follow a given course. — Describe the effect of using a gyro compass with hourly rate corrector unit to follow a given course. — Convert grid navigation data into true navigation data, into magnetic navigation data, and into compass navigation data. — Justify the selection of a different 'north' reference at a given position. — Calculate the effects of gyro drift due to the Earth's rotation ($15 \text{ degrees} / \text{h} \times \sin \text{Lm}$). | x | | | | | |
| 071 01 03 03 | MNPS airspace | | | | | | |
| LO | <p>Geographical limits:</p> <ul style="list-style-type: none"> — state the lateral dimensions (in general terms) and vertical limits of MNPS airspace (ICAO Doc 7030 NAT/RAC-2 3.2.1); — state that operators must ensure that crew follow NAT MNPSA Operations Manual procedures (ICAO Doc 7030 NAT/RAC-2 3.2.3). | x | | | | | |

L. SUBJECT 070 — OPERATIONAL PROCEDURES

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| LO | Define the following acronyms: MNPS, MNPSA, OCA, OTS, PRM, PTS, RVSM, LRNS, MASPS, SLOP, WATRS (MNPSA Manual, Glossary of Terms). | x | | | | | |
| LO | Aircraft system requirements (MNPSA Manual, Chapter 1): <ul style="list-style-type: none"> — navigation requirements for unrestricted MNPS airspace operations; — routes for use by aircraft not equipped with two LRNSs: routes for aircraft with only one LRNS, routes for aircraft with short-range navigation equipment only; — performance monitoring. | x | | | | | |
| LO | Organised Track System (MNPSA Manual, Chapter 2): <ul style="list-style-type: none"> — construction of the Organised Track System (OTS); — NAT track message; — OTS changeover periods. | x | | | | | |
| LO | Other routes and route structures within or adjacent to NAT MNPS airspace (MNPSA Manual, Chapter 3): <ul style="list-style-type: none"> — other routes within NAT MNPS airspace; — route structures adjacent to NAT MNPS airspace: North American routes (NARs), Canadian domestic track systems, routes between North America and the Caribbean area. | x | | | | | |
| LO | Flight planning (MNPSA Manual, Chapter 4): <ul style="list-style-type: none"> — all flights should plan to operate on great-circle tracks joining successive significant waypoints; — during the hours of validity of the OTS, operators are encouraged to flight plan as follows: in accordance with the OTS or along a route to join or leave an outer track of the OTS or on a random route to remain clear of the OTS; — flight levels available on OTS tracks during OTS periods; — flight levels on random tracks or outside OTS periods (appropriate direction levels). | x | | | | | |

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| <p>LO</p> | <p>Oceanic ATC Clearances (MNPSA Manual, Chapter 5):</p> <ul style="list-style-type: none"> — it is recommended that pilots should request their Oceanic Clearance at least 40 minutes prior to the oceanic entry point ETA; — pilots should notify the Oceanic Area control Centre (OAC) of the maximum acceptable flight level possible at the boundary; — at some airports, which are situated close to oceanic boundaries, the Oceanic Clearance must be obtained before departure; — if an aircraft, which would normally be RVSM and/or MNPS approved, encounters, whilst en route to the NAT Oceanic Airspace, a critical in-flight equipment failure, or at dispatch is unable to meet the MEL requirements for RVSM or MNPS approval on the flight, then the pilot must advise ATC at initial contact when requesting Oceanic Clearance; — After obtaining and reading back the clearance, the pilot should monitor the forward estimate for oceanic entry, and if this changes by 3 minutes or more, should pass a revised estimate to ATC; — the pilot should pay particular attention when the issued clearance differs from the flight plan, as a significant proportion of navigation errors investigated in the NAT involve an aircraft which has followed its flight plan rather than its differing clearance; — if the entry point of the oceanic route on which the flight is cleared differs from that originally requested and/or the oceanic flight level differs from the current flight level, the pilot is responsible for requesting and obtaining the necessary domestic re-clearance; — there are three elements to an Oceanic Clearance: route, Mach number and flight level. These elements serve to provide for the three basic elements of separation: lateral, longitudinal and vertical. | <p>x</p> | | | | | |
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| LO | <p>Communications and position-reporting procedures (MNPSA Manual, Chapter 6)</p> <p><i>HF voice communications</i></p> <ul style="list-style-type: none"> — Pilots communicate with OACs via aeradio stations staffed by communicators who have no executive ATC authority. Messages are relayed, from the ground station to the air traffic controllers in the relevant OAC for action. — Frequencies from the lower HF bands tend to be used for communications during night-time and those from the higher bands during daytime. — When initiating contact with an aeradio station, the pilot should state the HF frequency in use. <p><i>SATCOM voice communications</i></p> <p>Since oceanic traffic typically communicates with ATC through aeradio facilities, a SATCOM call made due to unforeseen inability to communicate by other means should be made to such a facility rather than the ATC centre, unless the urgency of the communication dictates otherwise.</p> <p>An air-to-air VHF frequency has been established for worldwide use when aircraft are out of range of VHF ground stations which utilise the same or adjacent frequencies. This frequency (123.45 MHz) is intended for pilot-to-pilot exchanges of operationally significant information.</p> <p>Standard position report message type.</p> <p>Some aircraft flying in the NAT are required to report MET observations of wind speed and direction plus outside-air temperature. Any turbulence encountered should be included in these reports.</p> <p>General guidance for aircraft operating in, or proposing to operate in, the NAT region, which experience a communications failure: general provisions, onboard HF equipment failure, poor HF propagation conditions, loss of HF communications prior to entry into the NAT, loss of HF communications after entering the NAT.</p> <p>All turbine-engine aeroplanes having a maximum certified take-off mass exceeding 5 700 kg or authorised to carry more than 19 passengers are required to carry and operate ACAS II in the NAT region.</p> | x | | | | | |
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| LO | <p>Application of Mach number technique (MNPSA Manual, Chapter 7):</p> <ul style="list-style-type: none"> — practical experience has shown that when two or more turbojet aircraft, operating along the same route at the same flight level, maintain the same Mach number, they are more likely to maintain a constant time interval between each other than when using other methods; — pilots must ensure that any required corrections to the indicated Mach number are taken into account when complying with the true Mach number specified in the ATC clearance; — after leaving oceanic airspace, pilots must maintain their assigned Mach number in domestic controlled airspace unless and until the appropriate ATC unit authorises a change. | x | | | | | |
| LO | <p>MNPS flight operation & navigation procedures (MNPSA Manual, Chapter 8):</p> <ul style="list-style-type: none"> — the pre-flight procedures for any NAT MNPS flight must include a UTC time check and resynchronisation of the aircraft master clock; — state the use of the Master Document; — state the requirements for position plotting; — PRE-FLIGHT PROCEDURES: alignment of IRS, Satellite Navigation Availability Prediction Programme for flights using GNSS LRNS, loading of initial waypoints, flight plan check; — IN-FLIGHT PROCEDURES: ATC Oceanic Clearance, entering the MNPS airspace and reaching an oceanic waypoint, routine monitoring; — Strategic Lateral Offset Procedure (SLOP): state that along a route or track there will be three positions that an aircraft may fly: centre line or one or two miles right. | x | | | | | |
| LO | <p>RVSM flight in MNPS airspace (MNPSA Manual, Chapter 9):</p> <ul style="list-style-type: none"> — state the altimeter cross-check to be performed before MNPS airspace entry; — state the altimeter cross-check to be performed into the MNPS airspace; — in NAT MNPS airspace, pilots always have to report to ATC immediately on reaching any new cruising level; — crews should report when a 300 ft or more deviation occurs. | x | | | | | |

L. SUBJECT 070 — OPERATIONAL PROCEDURES

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| LO | Navigation system degradation or failure (MNPSA Manual, Chapter 10) For this part, consider aircraft equipped with only two operational LRNSs. State the requirements for the following situations: — one system fails before take-off; — one system fails before the OCA boundary is reached; — one system fails after the OCA boundary is crossed; — the remaining system fails after entering MNPS airspace. | x | | | | | |
| LO | Special procedures for in-flight contingencies (MNPSA Manual, Chapter 11) <i>General</i> — Until a revised clearance is obtained, the specified NAT in-flight contingency procedures should be carefully followed. — The general concept of these NAT in-flight contingency procedures is, whenever operationally feasible, to offset from the assigned route by 15 NM and climb or descend to a level which differs from those normally used by 500 ft if below FL410 or by 1 000 ft if above FL410. — State the factors which may affect the direction of turn: direction to an alternate airport, terrain clearance, levels allocated on adjacent routes or tracks and any known SLOP offsets adopted by other nearby traffic. <i>Deviations around severe weather</i> — State that if the deviation is to be greater than 10 NM, the assigned flight level must be changed by ± 300 ft depending on the followed track and the direction of the deviation (Table 1). | x | | | | | |
| 071 01 03 04 | ETOPS | | | | | | |
| LO | State that ETOPS approval is part of an AOC. | x | | | | | |
| LO | State that prior to conducting an ETOPS flight, an operator shall ensure that a suitable ETOPS en route alternate is available, within either the approved diversion time or a diversion time based on the MEL-generated serviceability status of the aeroplane, whichever is shorter. | x | | | | | |
| LO | State the requirements for take-off alternate. | x | | | | | |

L. SUBJECT 070 — OPERATIONAL PROCEDURES

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| | LO | State the planning minima for ETOPS en route alternate. | x | | | | | | |
| 071 02 00 00 | | SPECIAL OPERATIONAL PROCEDURES AND HAZARDS (GENERAL ASPECTS) | | | | | | | |
| 071 02 01 00 | | Operations Manual | | | | | | | |
| 071 02 01 01 | | Operating procedures | | | | | | | |
| | LO | State that all non-type-related operational policies, instructions and procedures needed for a safe operation are included in Part A of the Operations Manual. | x | x | x | x | x | | |
| | LO | State that the following items are included into Part A: de-icing and anti-icing on the ground, adverse and potentially hazardous atmospheric conditions, wake turbulence, incapacitation of crew members, use of the minimum equipment and configuration deviation list(s), security, handling of accidents and occurrences. | x | x | x | x | x | | |
| | LO | State that the following items are included into Part A: altitude alerting system procedures, ground proximity warning system procedures, policy and procedures for the use of TCAS/ACAS. | x | x | | | | | |
| | LO | State that the following items are included into Part A: rotor downwash. | | | x | x | x | | |
| | LO | Define the following terms: 'commencement of flight', 'inoperative', 'MEL', 'MMEL', rectification interval. | x | x | x | x | x | | |
| | LO | Define the 'limits of MEL applicability'. | x | x | x | x | x | | |
| | LO | Identify the responsibilities of the operator and the authority with regard to MEL and MMEL. | x | x | x | x | x | | |
| | LO | State the responsibilities of the crew members with regard to MEL. | x | x | x | x | x | | |
| | LO | State the responsibilities of the commander with regard to MEL. | x | x | x | x | x | | |
| 071 02 01 02 | | Aeroplane/helicopter operating matters — type-related | | | | | | | |
| | LO | State that all type-related instructions and procedures needed for a safe operation are included in Part B of the Operations Manual. They will take account of any differences between types, variants or individual aircraft used by the operator. | x | x | x | x | x | | |

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| | LO | State that the following items are included into Part B: abnormal and emergency procedures, configuration deviation list, minimum equipment list, emergency evacuation procedures. | x | x | | | | |
| | LO | State that the following items are included into Part B: emergency procedures, configuration deviation list, minimum equipment list, emergency evacuation procedures. | | | x | x | x | |
| 071 02 02 00 | | Icing conditions | | | | | | |
| 071 02 02 01 | | On ground de-icing/anti-icing procedures, types of de-icing/anti-icing fluids | | | | | | |
| | LO | Define the following terms: 'anti-icing', 'de-icing', 'one-step de-icing/anti-icing', 'two-step de-icing/anti-icing', 'holdover time'. (ICAO Doc 9640 Glossary) | x | x | | | | |
| | LO | Define the following weather conditions: 'drizzle', 'fog', 'freezing fog', 'freezing drizzle', 'freezing rain', 'frost', 'rain', 'rime', 'slush', 'snow', 'dry snow', 'wet snow'. (ICAO Doc 9640 Glossary) | x | x | x | x | x | |
| | LO | Describe 'The clean aircraft concept' as presented in the relevant chapter of ICAO Doc 9640. (ICAO Doc 9640, Chapter 2) | x | x | | | | |
| | LO | List the types of de-icing/anti-icing fluids available. (ICAO Doc 9640, Chapter 4) | x | x | x | x | x | |
| | LO | State the procedure to be followed when an aeroplane has exceeded the holdover time. (ICAO Doc 9640, Chapter 4) | x | x | | | | |
| | LO | Interpret the fluid holdover time tables and list the factors which can reduce the fluid protection time. (ICAO Doc 9640, Chapter 5 + Attachment tables) | x | x | | | | |
| | LO | State that the pre-take-off check, which is the responsibility of the pilot-in-command, ensures that the critical surfaces of the aeroplane are free of ice, snow, slush or frost just prior to take-off. This check shall be accomplished as close to the time of take-off as possible and is normally made from within the aeroplane by visually checking the wings. (ICAO Doc 9640, Chapter 6) | x | x | | | | |
| | LO | State that an aircraft has to be treated symmetrically. (ICAO Doc 9640, Chapter 11) | x | x | | | | |

L. SUBJECT 070 — OPERATIONAL PROCEDURES

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| | LO | State that an operator shall establish procedures to be followed when ground de-icing and anti-icing and related inspections of the aeroplane(s) are necessary. | x | x | x | x | x | |
| | LO | State that a commander shall not commence take-off unless the external surfaces are clear of any deposit which might adversely affect the performance and/or controllability of the aircraft except as permitted in the Flight Manual. | x | x | x | x | x | |
| 071 02 02 02 | | Procedure to apply in case of performance deterioration, on ground/in flight | | | | | | |
| | LO | State that the effects of icing are wide-ranging, unpredictable and dependent upon individual aeroplane design. The magnitude of these effects is dependent upon many variables, but the effects can be both significant and dangerous. (ICAO Doc 9640, Chapter 1) | x | x | x | x | x | |
| | LO | State that in icing conditions, for a given speed and a given angle of attack, wing lift can be reduced by as much as 30 % and drag increased by up to 40 %. State that these changes in lift and drag will significantly increase stall speed, reduce controllability and alter flight characteristics. (ICAO Doc 9640, Chapter 1) | x | x | x | x | x | |
| | LO | State that ice on critical surfaces and on the airframe may also break away during take-off and be ingested into engines, possibly damaging fan and compressor blades. (ICAO Doc 9640, Chapter 1) | x | x | x | x | x | |
| | LO | State that ice forming on pitot tubes and static ports or on angle-of-attack vanes may give false altitude, airspeed, angle-of-attack and engine-power information for air-data systems. (ICAO Doc 9640, Chapter 1) | x | x | x | x | x | |
| | LO | State that ice, frost and snow formed on the critical surfaces on the ground can have a totally different effect on aircraft flight characteristics than ice formed in flight. (ICAO Doc 9640, Chapter 1) | x | x | x | x | x | |
| | LO | State that flight in known icing conditions is subject to limitations found in Part B of the Operations Manual. | x | x | x | x | x | |
| | LO | State where procedures and performances regarding flight in expected or actual icing conditions are located. | x | x | x | x | x | |
| 071 02 03 00 | | Bird-strike risk and avoidance | | | | | | |

L. SUBJECT 070 — OPERATIONAL PROCEDURES

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| LO | State that presence of birds constituting a potential hazard to aircraft operations is part of the pre-flight information. (ICAO Annex 15, Chapter 8) | x | x | x | x | x | |
| LO | State that information concerning the presence of birds observed by aircrews is made available to the Aeronautical Information Service for such distribution as the circumstances necessitate. (ICAO Annex 15, Chapter 8) | x | x | x | x | x | |
| LO | State that AIP ENR 5.6 contains information regarding bird migrations. (ICAO Annex 15, Appendix 1) | x | x | x | x | x | |
| LO | State significant data regarding bird strikes contained in ICAO Doc 9137. (ICAO Doc 9137, Part 3, 1.1.6) | x | x | x | x | x | |
| LO | List incompatible land use around airports. (ICAO Doc 9137, Part 3, 10.4) | x | x | x | x | x | |
| LO | Define the commander's responsibilities regarding the reporting of bird hazards and bird strikes. | x | x | x | x | x | |
| 071 02 04 00 | Noise abatement | | | | | | |
| 071 02 04 01 | Noise-abatement procedures | | | | | | |
| LO | Define the operator responsibilities regarding establishment of noise-abatement procedures. | x | x | x | x | x | |
| LO | State the main purpose of NADP 1 and NADP 2. (ICAO Doc 8168, Volume 1, Part V, 3.1.1) | x | x | x | x | x | |
| LO | State that the pilot-in-command has the authority to decide not to execute a noise-abatement departure procedure if conditions preclude the safe execution of the procedure. (ICAO Doc 8168, Volume 1, Part V, 3.2.1.3) | x | x | x | x | x | |
| 071 02 04 02 | Influence of the flight procedure (departure, cruise, approach) | | | | | | |
| LO | List the main parameters for NADP 1 and NADP 2 (i.e. speeds, heights, etc.). (ICAO Doc 8168, Volume 1, Part V, Appendix to Chapter 3) | x | x | | | | |
| LO | State that a runway lead-in lighting system should be provided where it is desired to provide visual guidance along a specific approach path for purposes of noise abatement. (ICAO Annex 14, Volume 1, 5.3.7.1/Volume 2, 5.3.4.1) | x | x | x | x | x | |
| LO | State that detailed information about noise-abatement procedures is to be found in AD 2 and 3 of the AIP. (ICAO Annex 15, Appendix 1) | x | x | x | x | x | |

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| 071 02 04 03 | Influence by the pilot (power setting, low drag) | | | | | | |
| LO | List the adverse operating conditions under which noise-abatement procedures in the form of reduced-power take-off should not be required. (ICAO Doc 8168, Volume 1, Part V, 3.2.2) | x | x | | | | |
| LO | List the adverse operating conditions under which noise-abatement procedures during approach should not be required. (ICAO Doc 8168, Volume 1, Part V, 3.4.4) | x | x | | | | |
| LO | State the rule regarding the use of reverse thrust on landing. (ICAO Doc 8168, Volume 1, Part V, 3.5) | x | x | | | | |
| 071 02 04 04 | Influence by the pilot (power setting, track of helicopter) | | | | | | |
| LO | List the adverse operating conditions under which noise-abatement procedures in the form of reduced-power take-off should not be required. (ICAO Doc 8168, Volume 1, Part V, 3.2.2) | | | x | x | x | |
| 071 02 05 00 | Fire and smoke | | | | | | |
| 071 02 05 01 | Carburettor fire | | | | | | |
| LO | List the actions to be taken in the event of a carburettor fire. | x | x | | | | |
| 071 02 05 02 | Engine fire | | | | | | |
| LO | List the actions to be taken in the event of an engine fire. | x | x | | | | |
| 071 02 05 03 | Fire in the cabin, cockpit, cargo compartment | | | | | | |
| LO | Identify the different types of extinguishants and the type of fire on which each one may be used. | x | x | | | | |
| LO | Describe the precautions to be considered in the application of fire extinguishant. | x | x | | | | |
| LO | Identify the appropriate handheld extinguishers to be used in the cockpit, the passenger cabin and toilets, and in the cargo compartments. | x | x | | | | |
| 071 02 05 04 | Smoke in the cockpit and cabin | | | | | | |
| LO | List the actions to be taken in the event of smoke in the cockpit or in the cabin. | x | x | | | | |
| 071 02 05 05 | Actions in case of overheated brakes | | | | | | |
| LO | Describe the problems and safety precautions following overheated brakes after landing or a rejected take-off. | x | x | | | | |

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| 071 02 06 00 | Decompression of pressurised cabin | | | | | | | |
| 071 02 06 01 | Slow decompression | | | | | | | |
| | LO Indicate how to detect a slow decompression or an automatic pressurisation system failure. | x | x | | | | | |
| | LO Describe the actions required following a slow decompression. | x | x | | | | | |
| 071 02 06 02 | Rapid and explosive decompression | | | | | | | |
| | LO Indicate how to detect a rapid or an explosive decompression. | x | x | | | | | |
| 071 02 06 03 | Dangers and action to be taken | | | | | | | |
| | LO Describe the actions required following a rapid or explosive decompression. | x | x | | | | | |
| | LO Describe the effects on aircraft occupants of a slow decompression and a rapid or explosive decompression. | x | x | | | | | |
| 071 02 07 00 | Wind shear and microburst | | | | | | | |
| 071 02 07 01 | Effects and recognition during departure and approach | | | | | | | |
| | LO Define the meaning of the term 'low-level windshear'. (ICAO Circular 186, Chapter 1) | x | x | x | x | x | | |
| | LO Define: vertical wind shear, horizontal wind shear, updraft and downdraft wind shear. (ICAO Circular 186, Chapter 2) | x | x | x | x | x | | |
| | LO Identify the meteorological phenomena associated with wind shear. (ICAO Circular 186, Chapter 3) | x | x | x | x | x | | |
| | LO Explain recognition of wind shear. (ICAO Circular 186, Chapter 4) | x | x | x | x | x | | |
| 071 02 07 02 | Actions to avoid and actions to take during encounter | | | | | | | |
| | LO Describe the effects of and actions required when encountering wind shear, at take-off and approach. (ICAO Circular 186, Chapter 4) | x | x | x | x | x | | |
| | LO Describe the precautions to be taken when wind shear is suspected, at take-off and approach. (ICAO Circular 186, Chapter 4) | x | x | x | x | x | | |
| | LO Describe the effects of and actions required following entry into a strong downdraft wind shear. (ICAO Circular 186, Chapter 4) | x | x | x | x | x | | |
| | LO Describe a microburst and its effects. (ICAO Circular 186, Chapter 4) | x | x | x | x | x | | |

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| 071 02 08 00 | Wake turbulence | | | | | | | |
| 071 02 08 01 | Cause | | | | | | | |
| | LO Define the term 'wake turbulence'. (ICAO Doc 4444, 4.9) | x | x | x | x | x | | |
| | LO Describe tip vortices circulation. (ICAO Doc 9426, Part II) | x | x | x | x | x | | |
| | LO Explain when vortex generation begins and ends. (ICAO Doc 9426, Part II) | x | x | x | x | x | | |
| | LO Describe vortex circulation on the ground with and without crosswind. (ICAO Doc 9426, Part II) | x | x | x | x | x | | |
| 071 02 08 02 | List of relevant parameters | | | | | | | |
| | LO List the three main factors which, when combined, give the strongest vortices (heavy, clean, slow). (ICAO Doc 9426, Part II) | x | x | x | x | x | | |
| | LO Describe the wind conditions which are worst for wake turbulence near the ground. (ICAO Doc 9426, Part II) | x | x | x | x | x | | |
| 071 02 08 03 | Actions to be taken when crossing traffic, during take-off and landing | | | | | | | |
| | LO Describe the actions to be taken to avoid wake turbulence, specially separations. (ICAO Doc 4444, 5) | x | x | x | x | x | | |
| 071 02 09 00 | Security (unlawful events) | | | | | | | |
| 071 02 09 01 | ICAO Annex 17 | | | | | | | |
| | LO Give the following definitions: aircraft security check, screening, security, security-restricted area, unidentified baggage. (ICAO Annex 17, 1) | x | x | x | x | x | | |
| | LO Give the objectives of security. (ICAO Annex 17, 2.1) | x | x | x | x | x | | |
| 071 02 09 02 | Use of Secondary Surveillance Radar (SSR) | | | | | | | |
| | LO Describe the commander's responsibilities concerning notifying the appropriate ATS unit. (ICAO Annex 17 Attachment) | x | x | x | x | x | | |
| | LO Describe the commander's responsibilities concerning operation of SSR. (ICAO Annex 17 Attachment) | x | x | x | x | x | | |
| | LO Describe the commander's responsibilities concerning departing from assigned track and/or cruising level. (ICAO Annex 17 Attachment) | x | x | x | x | x | | |

L. SUBJECT 070 — OPERATIONAL PROCEDURES

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| | LO | Describe the commander's responsibilities concerning the action required or being requested by an ATS unit to confirm SSR code and ATS interpretation response. (ICAO Annex 17 Attachment) | x | x | x | x | x | |
| 071 02 09 03 | | Security | | | | | | |
| | LO | State the requirements regarding training programmes. | x | x | x | x | x | |
| | LO | State the requirements regarding reporting acts of unlawful interference. | x | x | x | x | x | |
| | LO | State the requirements regarding aircraft search procedures. | x | x | x | x | x | |
| 071 02 10 00 | | Emergency and precautionary landings | | | | | | |
| 071 02 10 01 | | Definition | | | | | | |
| | LO | Define 'ditching', 'precautionary landing', 'emergency landing'. | x | x | x | x | x | |
| | LO | Describe a ditching procedure. | x | x | x | x | x | |
| | LO | Describe a precautionary landing. | x | x | x | x | x | |
| | LO | Explain the factors to be considered when deciding to make a precautionary/emergency landing or ditching. | x | x | x | x | x | |
| 071 02 10 02 | | Cause | | | | | | |
| | LO | List some reasons that may require a ditching, a precautionary landing or an emergency landing. | x | x | x | x | x | |
| 071 02 10 03 | | Passenger information | | | | | | |
| | LO | Describe the passenger briefing to be given before conducting a precautionary/emergency landing or ditching (including evacuation). | x | x | x | x | x | |
| 071 02 10 04 | | Action after landing | | | | | | |
| | LO | Describe the actions and responsibilities of crew members after landing. | x | x | x | x | x | |
| 071 02 10 05 | | Evacuation | | | | | | |
| | LO | State that the aircraft must be stopped and the engine shut down before launching an emergency evacuation. | x | x | x | x | x | |
| | LO | State that evacuation procedures are to be found in Part B of the Operations Manual. | x | x | x | x | x | |
| | LO | State the CS-25 requirements regarding evacuation procedures. (CS 25.803 + Appendix J) | x | x | | | | |
| 071 02 11 00 | | Fuel jettisoning | | | | | | |

| | | | | | | | |
|---------------------|--|---|---|---|---|---|--|
| 071 02 11 01 | Safety aspects | | | | | | |
| LO | State that an aircraft may need to jettison fuel so as to reduce its landing mass in order to effect a safe landing. (ICAO Doc 4444, 15.5.3) | x | x | | | | |
| LO | State that when an aircraft operating within controlled airspace needs to jettison fuel, the flight crew shall coordinate with ATC the following: route to be flown which, if possible, should be clear of cities and towns, preferably over water and away from areas where thunderstorms have been reported or are expected; the level to be used, which should be not less than 1 800 m (6 000 ft); and the duration of fuel jettisoning. (ICAO Doc 4444, 15.5.3) | x | x | | | | |
| LO | State that flaps and slats may adversely affect fuel jettisoning. (CS 25.1001) | x | x | | | | |
| 071 02 11 02 | Requirements | | | | | | |
| LO | State that a fuel-jettisoning system must be installed on each aeroplane unless it is shown that the aeroplane meets some CS-25 climb requirements. (CS 25.1001) | x | x | | | | |
| LO | State that a fuel-jettisoning system must be capable of jettisoning enough fuel within 15 minutes. (CS 25.1001) | x | x | | | | |
| 071 02 12 00 | Transport of dangerous goods | | | | | | |
| 071 02 12 01 | ICAO Annex 18 | | | | | | |
| LO | Give the following definitions: dangerous goods, dangerous goods accident, dangerous goods incident, exemption, incompatible, packaging, UN number. (ICAO Annex 18, Chapter 1) | x | x | x | x | x | |
| LO | State that detailed provisions for dangerous goods transportation are contained in the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284). (ICAO Annex 18, Chapter 2, 2.2.1) | x | x | x | x | x | |
| LO | State that in case of an in-flight emergency, the pilot-in-command must inform the ATC of dangerous goods transportation. (ICAO Annex 18, Chapter 9, 9.5) | x | x | x | x | x | |
| 071 02 12 02 | Technical Instructions (ICAO Doc 9284) | | | | | | |
| LO | Explain the principle of compatibility and segregation. (ICAO Doc 9284) | x | x | x | x | x | |
| LO | Explain the special requirements for the loading of radioactive materials. (ICAO Doc 9284) | x | x | x | x | x | |

L. SUBJECT 070 — OPERATIONAL PROCEDURES

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|---------------------|----|--|---|---|---|---|---|--|
| | LO | Explain the use of the dangerous goods list. (ICAO Doc 9284) | x | x | x | x | x | |
| | LO | Identify the labels. (ICAO Doc 9284) | x | x | x | x | x | |
| 071 02 12 03 | | Transport of dangerous goods by air | | | | | | |
| | LO | State that dangerous goods transportation is subject to operator approval. | x | x | x | x | x | |
| | LO | Identify articles and substances, which would otherwise be classed as dangerous goods, that are excluded from the provisions. | x | x | x | x | x | |
| | LO | State that some articles and substances may be forbidden for air transportation. | x | x | x | x | x | |
| | LO | State that packing must comply with the Technical Instructions specifications. | x | x | x | x | x | |
| | LO | List the labelling and marking requirements. | x | x | x | x | x | |
| | LO | List the Dangerous Goods Transport Document requirements. | x | x | x | x | x | |
| | LO | List the Acceptance of Dangerous Goods requirements. | x | x | x | x | x | |
| | LO | Explain the need for an inspection prior to loading on an aircraft. | x | x | x | x | x | |
| | LO | State that some dangerous goods are designated for carriage only on cargo aircraft. | x | x | x | x | x | |
| | LO | State that accidents or incidents involving dangerous goods are to be reported. | x | x | x | x | x | |
| | LO | State that misdeclared or undeclared dangerous goods found in baggage are to be reported. | x | x | x | x | x | |
| 071 02 13 00 | | Contaminated runways | | | | | | |
| 071 02 13 01 | | Kinds of contamination | | | | | | |
| | LO | Define a 'contaminated runway', a 'damp runway', a 'wet runway', and a 'dry runway'. | x | x | | | | |
| | LO | List the different types of contamination: damp, wet or water patches, rime or frost-covered, dry snow, wet snow, slush, ice, compacted or rolled snow, frozen ruts or ridges. (ICAO Annex 15, Appendix 2) | x | x | | | | |
| | LO | Give the definitions of the various types of snow. (ICAO Annex 15, Appendix 2) | x | x | | | | |
| 071 02 13 02 | | Estimated surface friction, friction coefficient | | | | | | |
| | LO | Identify the difference between friction coefficient and estimated surface friction. (ICAO Annex 15, Appendix 2) | x | x | | | | |

| | | | | | | | | |
|---------------------|----|---|---|---|---|---|---|--|
| | LO | State that when friction coefficient is 0.40 or higher, the expected braking action is good. (ICAO Annex 15, Appendix 2) | x | x | | | | |
| 071 02 13 03 | | Hydroplaning principles and effects | | | | | | |
| | LO | Define the different types of hydroplaning. (NASA TM-85652/Tire friction performance/ pp. 6 to 9) | x | x | | | | |
| | LO | Compute the two dynamic hydroplaning speeds using the following formulas: Spin-down speed (rotating tire) (kt) = 9 square root (pressure in PSI) Spin-up speed (non-rotating tire) (kt) = 7.7 square root (pressure in PSI). (NASA TM-85652/Tire friction performance /p. 8) | x | x | | | | |
| | LO | State that it is the spin-up speed rather than the spin-down speed which represents the actual tire situation for aircraft touchdown on flooded runways. (NASA TM-85652/Tire friction performance/p. 8) | x | x | | | | |
| 071 02 13 04 | | Procedures | | | | | | |
| | LO | State that some wind limitations may apply in case of contaminated runways. Those limitations are to be found in Part B of the Operations Manual — Limitations. | x | x | | | | |
| | LO | State that the procedures associated with take-off and landing on contaminated runways are to be found in Part B of the Operations Manual — Normal procedures. | x | x | | | | |
| | LO | State that the performances associated with contaminated runways are to be found in Part B of the Operations Manual — Performance. | x | x | | | | |
| 071 02 13 05 | | SNOWTAM | | | | | | |
| | LO | Interpret from a SNOWTAM the contamination and braking action on a runway. | x | x | | | | |
| 071 02 14 00 | | Rotor downwash | | | | | | |
| 071 02 14 01 | | Describe downwash | | | | | | |
| | LO | Describe the downwash. | | | x | x | x | |
| 071 02 14 02 | | Effects | | | | | | |
| | LO | Explain the effects on: soil erosion, water dispersal and spray, recirculation, damage to property, loose articles. | | | x | x | x | |

L. SUBJECT 070 — OPERATIONAL PROCEDURES

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|---------------------|---|--|--|---|---|---|--|
| 071 02 15 00 | Operation influence by meteorological conditions (Helicopter) | | | | | | |
| 071 02 15 01 | White-out/sand/dust | | | | | | |
| | LO Give the definition of 'white-out'. | | | X | X | X | |
| | LO Describe loss of spatial orientation. | | | X | X | X | |
| | LO Describe take-off and landing techniques. | | | X | X | X | |
| 071 02 15 02 | Strong winds | | | | | | |
| | LO Describe blade sailing. | | | X | X | X | |
| | LO Describe wind operating envelopes. | | | X | X | X | |
| | LO Describe vertical speed problems. | | | X | X | X | |
| 071 02 15 03 | Mountain environment | | | | | | |
| | LO Describe constraints associated with mountain environment. | | | X | X | X | |
| 071 03 00 00 | EMERGENCY PROCEDURES (HELICOPTER) | | | | | | |
| 071 03 01 00 | Influence of technical problems | | | | | | |
| 071 03 01 01 | Engine failure | | | | | | |
| | LO Describe techniques for failure in: hover, climb, cruise, approach. | | | X | X | X | |
| 071 03 01 02 | Fire in cabin/cockpit/engine | | | | | | |
| | LO Describe the basic actions when encountering fire in the cabin, cockpit or engine. | | | X | X | X | |
| 071 03 01 03 | Tail/rotor/directional control failure | | | | | | |
| | LO Describe the basic actions following loss of tail rotor. | | | X | X | X | |
| | LO Describe the basic actions following loss of directional control. | | | X | X | X | |
| 071 03 01 04 | Ground resonance | | | | | | |
| | LO Describe recovery actions. | | | X | X | X | |
| 071 03 01 05 | Blade stall | | | | | | |
| | LO Describe cause and recovery actions when encountering retreating blade stall. | | | X | X | X | |
| 071 03 01 06 | Settling with power (vortex ring) | | | | | | |
| | LO Describe prerequisite conditions and recovery actions. | | | X | X | X | |
| 071 03 01 07 | Overpitch | | | | | | |
| | LO Describe recovery actions. | | | X | X | X | |
| 071 03 01 08 | Overspeed: rotor/engine | | | | | | |

L. SUBJECT 070 — OPERATIONAL PROCEDURES

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|---------------------|----|---|--|--|---|---|---|--|
| | LO | Describe overspeed control. | | | x | x | x | |
| 071 03 01 09 | | Dynamic rollover | | | | | | |
| | LO | Describe potential conditions and recovery action. | | | x | x | x | |
| 071 03 01 10 | | Mast bumping | | | | | | |
| | LO | Describe conditions 'conducive to' and 'avoidance of' effect. | | | x | x | x | |