

010

AIR LAW

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
010 00 00 00	<u>AIR LAW AND ATC PROCEDURES</u>	
010 01 00 00	<u>INTERNATIONAL AGREEMENTS AND ORGANISATIONS</u>	
010 01 01 00	<u>The Convention of Chicago</u> <ul style="list-style-type: none"> – Historical background – Explain the worldwide political situation and climate at the end of WW II and its influence on the establishment of the Convention on International Civil Aviation 	ICAO Doc 7300 / 6, Chicago, December 7.1944
010 01 01 01	<u>Part I Air Navigation</u> <ul style="list-style-type: none"> – General principles – Describe the application of the following terms in Civil Aviation <ul style="list-style-type: none"> – Territory, Sovereignty, Suzerainty – Territorial Waters, High Seas, according to the UN Convention of the High Seas – Flight over territory of contracting states – Define the following terms and explain how they apply to the Law of Nations (International Law) <ul style="list-style-type: none"> – Right for non scheduled flights; scheduled air services, cabotage, landing at customs airports, applicability of air regulations, rules of the air, search and rescue of ACFT – Describe the duties of ICAO Member States in relation to <ul style="list-style-type: none"> – Measures to facilitate air navigation; customs duty; conditions to be fulfilled with respect to ACFT; certificates of airworthiness, licenses of personnel, recognition of certificates and licenses, cargo restrictions, photographic apparatus; documents to be carried in ACFT 	UN Convention of the High Seas, Oct. 7. 1982

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010 01 01 02	<ul style="list-style-type: none"> - International standards and recommended practices - Explain the obligations of each ICAO Member State towards: <ul style="list-style-type: none"> - Adoption of international standards and procedures; endorsements of certificates and licenses, validity of endorsed certificates and licenses; departure from international standards and procedures (notification of differences) <p><u>Part II The International Civil Aviation Organisation / ICAO</u></p> <ul style="list-style-type: none"> - Describe and explain the Structure and Objectives of the International Civil Aviation Organisation / ICAO. State the parts of the organisation assembled permanently or periodically <ul style="list-style-type: none"> - Assembly - Council, Secretary - Commissions - Explain the Duties of the <ul style="list-style-type: none"> - ICAO Headquarters - Regional structure and Offices 	<p>ICAO Doc 7300 / 6, Chicago, December 7.1944</p>
010 01 02 00	<p><u>Other international agreements</u> (Multilateral and bilateral agreements)</p>	<p>ICAO Doc. 7030</p>
010 01 02 03	<p><u>European organisations:</u> <u>Names, composition, agreements, objectives and relevant documents</u></p> <p>European Council, European Union / EU</p> <ul style="list-style-type: none"> - What are the targets of the European Union with regards to 	

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	<p>definitions:</p> <p style="padding-left: 40px;">Category of ACFT, dual instruction time, flight time, flight time as SPIC, instrument time, instrument flight time, instrument ground time, MCC, multi-pilot-aeroplanes, night, PPL, CPL, proficiency check, rating, renewal, revalidation, skill test, solo flight time, type of ACFT</p> <ul style="list-style-type: none"> - Explain the requirements to act as a flight crew member of a civil aeroplane registered in a JAA Member State - State to what extent JAA Member States will accept licences etc. issued by other JAA Member States - List the maximum period of time for which the different licences may be issued - Describe the two factors which are relevant for the validity of a licence - State the requirement regarding a medical certificate <ul style="list-style-type: none"> - When applying for a licence - When exercising the privileges of a licence - Explain why a Pilot shall not exercise the privileges of a licence, related ratings or authorisations when he is aware of any decrease in medical fitness - List the restrictions for licence holders with an age of 60 years or more - Define the term "State of licence Issue" - Explain the term "Normal Residency" for normal circumstances - Describe the specifications for flight crew licences as mentioned in Appendix 1 to JAR-FCL 1.075 - JAR-FCL 1 / Commercial Pilot Licence (Aeroplane) - CPL(A) <ul style="list-style-type: none"> - Name the minimum age at which one may obtain a CPL(A) - State the class of medical certificate by which an applicant for a CPL(A) shall prove the required medical fitness - Name the kind of medical certificate required when exercising the privileges of a CPL(A) - State the class of aeroplane on which a CPL(A) holder has the privilege to act as PIC in 	<p>JAR-FCL 1</p>

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<p>010 05 00 00</p> <p>010 05 01 00</p>	<p>Commercial Air Transport</p> <ul style="list-style-type: none"> - State which pilot's licence is required to act as co-pilot in Commercial Air Transportation - JAR - FCL 1 / Ratings <ul style="list-style-type: none"> - Explain the requirements for Class- Type and Instructor Ratings laid down in the JAR-FCL - JAR-FCL 3 / Medical Requirements <ul style="list-style-type: none"> - Describe the relevant content of JAR-FCL 3 - Medical Requirements (administrative parts and requirements related to licensing, only) <p><u>RULES OF THE AIR (based on ANNEX 2)</u></p> <p><u>ANNEX 2</u></p> <ul style="list-style-type: none"> - Essential Definitions <ul style="list-style-type: none"> - Recall the definitions issued in ANNEX 2 so as to be able to choose the correct one from a set of different definitions except: <ul style="list-style-type: none"> acrobatic flight, air-ground control radio station, air taxiing, flight status, unmanned free balloon - Applicability of the Rules of the Air <ul style="list-style-type: none"> - Explain to what extent the ICAO Rules of the Air apply in general - Explain to what extent the ICAO Rules of the Air apply over the High Seas - State the three possible rules which must be complied with on the movement area of an AD or when in flight 	<p>JAR-FCL 3</p>

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	<ul style="list-style-type: none"> – State who aboard an ACFT is primarily responsible for the operation of the ACFT in accordance with the Rules of the Air – Indicate under what circumstances departure from the Rules of the Air may be allowed – State who has the final authority as to the disposition of the ACFT – Explain the interrelation between intoxicating liquor, narcotics or drugs and the assignment to act as a flight crew member – General Rules <ul style="list-style-type: none"> – State the basic requirements for minimum height over congested areas of cities, towns or settlements or over an open-air assembly of persons – Define when the cruising levels shall be expressed in terms of FLs – Define under what circumstances cruising levels shall be expressed in terms of altitudes – Explain the limitation for proximity to other ACFT and the Rules for the Right-of-Way, including holding at taxi-holding positions and lighted stop bars – Describe the significance of Light Signals displayed to and by ACFT – Describe the requirements for simulated instrument flights – Indicate the basic rules for an ACFT operating on and in the vicinity of an AD – Give a survey of the requirements for the submission of a flight plan (PLN) – Describe the contents of a flight plan (PLN) – Explain the considerations concerning changes to a flight plan (PLN) – State how an arrival report shall be made after landing by a flight for which a flight plan (PLN) has been submitted covering the entire flight or the remaining portion of a flight to the destination AD 	

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	<ul style="list-style-type: none"> – Describe which items must be included in an arrival report – Describe the standard time as used in aviation – State for which flights an ATC CLR shall be obtained – State how a pilot may request an ATC CLR – State the action to be taken if an ATC CLR is not satisfactory to a PIC – Describe the possible reasons for not adhering to a current flight plan – State the deviation from TAS, to be reported to the appropriate ATS Service Unit – State the flight time deviation relevant to the estimate over the next RP, that must be reported to the appropriate ATS unit – Describe the required actions to be carried out, if the continuation of a controlled VFR flight in VMC is not practicable anymore – Describe the provisions for transmitting a position report to the appropriate air traffic services unit including time of transmission and normal content of the message – Describe the necessary action of an ACFT when experiencing COM failure – State what information an ACFT being subjected to unlawful interference shall give to the appropriate ATS unit – Explain why ICAO urges the Contracting States to apply ICAO recommendations concerning interceptions of civil aircraft in a uniform manner – State the deviation from TAS, to be reported to the appropriate ATS Service Unit – State the flight time deviation of an estimate for the next RP, that has to be reported to the appropriate ATS unit – Describe the required actions to be carried out, if the continuation of a controlled VFR flight in VMC 	

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	<p>is not practicable anymore</p> <ul style="list-style-type: none"> - Describe the provisions for transmitting a position report to the appropriate air traffic services unit including time of transmission and normal content of the message - Describe the necessary action of an ACFT when experiencing COM failure - State what information an ACFT being subjected to unlawful interference shall give to the appropriate ATS unit - Explain why ICAO urges the Contracting States to apply ICAO recommendations concerning interceptions of civil aircraft in a uniform manner - Visual Flight Rules / VFR <ul style="list-style-type: none"> - Recall the Visual Flight Rules, with special emphasis on VFR-minima and VFR-cruising levels and application of the classification of Airspace - Signals <ul style="list-style-type: none"> - Recall the signals described in Appendix 1 to ANNEX 2, except marshalling signals for helicopters (No. 16 through 20) - Interception of Civil Aircraft <ul style="list-style-type: none"> - State the primary task for interception of civil ACFT by military ACFT - List the possible reasons for intercepting a civil ACFT besides determining its identity - State what primary reaction is expected of an intercepted ACFT - State which FREQ should primarily be tried in order to contact the intercepting ACFT - State on which Mode and Code a transponder on board the intercepted ACFT should be operated in case of an interception - Tables of cruising levels <ul style="list-style-type: none"> - Show your capability to use the tables of cruising levels contained in Appendix 3 of ANNEX 2 	<p>ICAO ANNEX 2 Chapter 4</p> <p>ICAO ANNEX 2 Appendix 1</p> <p>ICAO ANNEX 2 Appendix 2</p> <p>ICAO ANNEX 2 Appendix 3</p>

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010 06 00 00	<u>PROCEDURES FOR AIR NAVIGATION SERVICES / AIRCRAFT OPERATIONS</u>	
	<u>DOC 8168 / Vol. 1 – Flight Procedures</u>	
010 06 01 00	<u>Foreword</u>	Differences in Doc. 7030 - Regional Supplementary Procedures
	<ul style="list-style-type: none"> - Translate the term “PANS-OPS“ into plain language - State the general aim of Doc. 8168 (PANS-OPS) 	Doc. 8168 (PANS-OPS), Volume I
010 06 02 00	<u>Essential Definitions and Abbreviations</u>	Flight Procedures
	<ul style="list-style-type: none"> - Essential Definitions <ul style="list-style-type: none"> - Recall all definitions includes in Doc. 8168 1 to such an extent that you can choose the correct definition from a series of offered samples - Essential Abbreviations used in Doc. 8168 - Interpret all abbreviations as shown in Chapter 2 	Abbreviations
010 06 03 00	<u>Departure procedures</u>	
	<ul style="list-style-type: none"> - General Criteria <ul style="list-style-type: none"> - Explain whether or not the departure procedures described in this Document assume that all engines are operating - Name, in general, the factors which dictate the design of an instrument departure procedure - Decode the abbreviation ATTCS - Explain in which situations the criteria for omni-directional departures are applied - Describe the alternative solution for flights which can only depart at higher speeds than prescribed for turning departures (i.e. in case of required turns of more than 15° to avoid an obstacle) - Standard Instrument Departures <ul style="list-style-type: none"> - Define the term “straight departure“ as opposed to a “turning departure“ 	

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010 06 04 00	<ul style="list-style-type: none"> - State who is responsible for the development of contingency procedures required to cover the case of engine failure or an emergency in flight which occurs after V_1 - Omni-directional Departures <ul style="list-style-type: none"> - Explain in which case the “omni-directional method“ is used to develop the departure criteria - Describe the possible solutions if obstacles do not permit development of omni-directional procedures - Published Information <ul style="list-style-type: none"> - State the conditions that must be fulfilled if a departure route is to be labeled an RNAV route - Describe how restrictions for omni-directional departures will be expressed in the appropriate publication - Area Navigation (RNAV) Departure Procedures Based on VOR / DME <ul style="list-style-type: none"> - Explain the connection between RNAV departure procedures based on VOR/DME and RNAV approach procedures based on VOR / DME - Use of FMS / RNAV Equipment to Follow Conventional Departure Procedures <ul style="list-style-type: none"> - State the provisions for using FMS / RNAV equipment when flying conventional departure procedures <p><u>Approach Procedures</u></p> <ul style="list-style-type: none"> - General Criteria (except tables “Speeds for procedure calculations”) <ul style="list-style-type: none"> - Name the five possible segments of an instrument approach procedure - State the maximum angle between the final approach track and the extended RWY centre-line to still consider a non-precision-approach as being a “Straight-In APP“ - State the minimum obstacle clearance provided by the minimum sector altitudes / MSA established for an AD - Name the special task for pilots caused by the fact that instrument approach procedures are based 	

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	<p>on <u>tracks</u></p> <ul style="list-style-type: none"> – Name the most significant performance factor influencing the conduct of instrument APP procedures – State the basic information (or conditions) for establishing the five categories of typical ACFT in connection with the description of instrument APP procedures – State the aim for using five well defined categories of typical ACFT when describing instrument APP procedures – List the five categories of ACFT used in connection with instrument APP procedures – Explain OCA / H for a precision APP procedure, a non-precision APP procedure and a visual (circling) procedure – Describe, in general terms, how operational minima for landing are developed – Name the operational minima which are finally produced starting from OCA / H in case of precision approaches or non-precision approaches, respectively – Explain when OCH is referring to THR ELEV and when to AD ELEV (differentiating between precision approach, non-precision approach and visual manoeuvring (circling)) – Relate the highest approach obstacle, the highest missed approach obstacle and the highest obstacle in circling area to precision approach, non-precision approach and visual manoeuvring – Translate the abbreviations used with the calculation of decision altitude, decision height, minimum descent altitude and minimum descent height into plain language: DA / DH / OCA / OCH / MDA / MDH / MOC / DA/H / OCA/H / MDA/H – State the minimum obstacle clearance (fixed margin for all ACFT) with and without final APP fix for a non-precision approach – Approach Procedure Design <ul style="list-style-type: none"> – Describe how the vertical cross-section for each of the five approach segments is broken down into the various areas 	

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	<ul style="list-style-type: none"> – State within which area of the cross-section the Minimum Obstacle Clearance (MOC) is provided for the whole width of the area – Define the terms IAF, IF, FAF, MAPt and TP – Name the area within which the plotted point of an intersection fix may lie – Explain by which factors the dimensions of an intersection fix are determined – State the accuracy of facilities providing track (VOR, ILS, NDB) – Describe the “other fix tolerance factors“: <ul style="list-style-type: none"> – Surveillance Radar (Terminal Area Radar / TAR, En-route surveillance radar / RSR) – DME – 75 MHz Marker Beacon – Fixes overhead a station (VOR, NDB) – Describe the basic information relating to approach area sectors – State the optimum descent gradient (preferred for a precision approach) in degrees and percent – Arrival and Approach Segments <ul style="list-style-type: none"> – Name the five standard segments of an instrument APP procedure and state the beginning and end for each of them – Describe where an ARR route normally ends – State whether or not omni-directional or sector arrivals can be provided – Explain the main task for the initial APP segment – Describe the maximum angle of interception between the initial APP segment and the intermediate APP segment (provided at the intermediate fix) for a precision APP and a non-precision APP – Describe the main task of the intermediate APP segment 	

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	<ul style="list-style-type: none"> – State the main task of the final APP segment – Name the two possible aims of a final APP – Explain the term “final approach point“ in case of an ILS approach – State what happens if an ILS-GP becomes inoperative during the APP – Missed Approach <ul style="list-style-type: none"> – Name the three phases of a missed approach procedure and describe their geometric limits – Describe the main task of a missed approach procedure – State at which height / altitude the missed approach is assured to be initiated – Define the term “missed approach point (MAPt)“ – Describe how an MAPt may be established in an approach procedure – State the pilot’s reaction if, upon reaching the MAPt, the required visual reference is not established – Describe what a pilot is expected to do in the event a missed approach is initiated prior to arriving at the MAPt State whether the pilot is obliged to cross the MAPt at the height / altitude required by the procedure or whether he is allowed to cross the MAPt at an altitude / height greater than that required by the procedure – Visual manoeuvring (circling) in the vicinity of the AD <ul style="list-style-type: none"> – Describe what is meant by “visual manoeuvring (circling)“ – Describe how a visual manoeuvring (circling) area can be constructed – Describe how a prominent obstacle in the visual manoeuvring (circling) area outside the final approach and missed approach area has to be considered for the visual circling – State for which types of ACFT the obstacle clearance altitude/height within an established visual manoeuvring (circling) area is determined – Describe how an MDA/H is specified for visual manoeuvring (circling) if the OCA /H is known 	

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010 06 05 00	<ul style="list-style-type: none"> - State the conditions to be fulfilled before descending below MDA / H in a visual manoeuvring (circling) approach - Describe why there can be no single procedure designed that will cater for conducting a circling approach in every situation - State how the pilot is expected to behave after initial visual contact during a visual manoeuvring (circling) - Describe what the pilot is expected to do if visual reference is lost while circling to land from an instrument approach - Aera Navigation (RNAV) Approach Procedures based on VOR / DME <ul style="list-style-type: none"> - Describe the provisions that must be fulfilled before carrying out VOR / DME RNAV approaches - Explain the disadvantages of the VOR / DME RNAV system - List the factors on which the navigational accuracy of the VOR / DME RNAV system depends - State whether the VOR / DME / RNAV approach is a precision or a non-precision procedure - Use of FMS / RNAV equipment to follow conventional non-precision approach procedures <ul style="list-style-type: none"> - State the provisions for flying the conventional non-precision approach procedures using an available FMS / RNAV equipment - <u>Holding Procedures</u> <ul style="list-style-type: none"> - In-flight Procedures - Explain why deviations from the in-flight procedures of a holding established in accordance with Doc. 8168 are dangerous <ul style="list-style-type: none"> - Describe how the right turns holdings (as described in Doc. 8168) can be transferred to left turns holding patterns - Describe the shape and terminology associated with the holding pattern 	

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010 06 06 00	<ul style="list-style-type: none"> – State the bank angle and rate of turn to be used whilst flying in a holding <ul style="list-style-type: none"> – Explain why pilots in a holding pattern should attempt to maintain tracks and how this can be achieved – Describe where outbound timing begins in a holding pattern – State where the outbound leg in a holding terminates if the outbound leg is based on DME – Describe the three heading-entry-sectors for entries into a holding pattern and at the same time define the terms “parallel entry“, “offset entry“ and “direct entry“ – State the still air time for flying the outbound entry heading with or without DME – Describe what the pilot is expected to do when clearance is received specifying the time of departure from the holding point – Obstacle Clearance <ul style="list-style-type: none"> – Describe the layout of the basic holding area, entry area and buffer area of a holding pattern – State which obstacle clearance is provided by a minimum permissible holding level referring to the holding area, the buffer area (general only) and over high terrain or in mountainous areas <p><u>Altimeter Setting Procedures</u></p> <ul style="list-style-type: none"> – Introduction <ul style="list-style-type: none"> – Describe the two main objectives for altimeter settings – Define the terms „QNH“ and „QFE“ – Describe the different terms of altitude or Flight Levels respectively which are the references during climb or descent to change the altimeter setting from QNH to Standard and vice versa – Basic Requirements 	

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	<ul style="list-style-type: none"> – Define the term “Flight Level / FL“ – State where Flight Level zero shall be located – State the pressure interval by which consecutive Flight Levels shall be separated – Describe how Flight Levels shall be numbered – Define the term “Transition Altitude“ – State how Transition Altitudes shall normally be specified – Explain how the calculated height of the Transition Altitude (which shall be as low as possible but normally not less than 900 m / 3000 ft above the AL) shall be expressed in practice – State where Transition Altitudes shall be published – Define the term “Transition Level“ – State when the Transition Level is normally passed to ACFT – State how (in terms of altitudes or Flight Levels) the vertical position of aircraft shall be expressed at or below the Transition Altitude and how this shall be done at or above the Transition Level – Define the term “Transition Layer“ – Describe when the vertical position of an aircraft passing through the Transition Layer shall be expressed in terms of Flight Levels and when in terms of altitude – State when the QNH altimeter setting shall be made available to departing ACFT – Explain when the vertical separation of aircraft during en-route flight shall be assessed in terms of altitude and when in terms of Flight Levels – Explain when, in air-ground communications during an en-route flight the vertical position of an ACFT shall be expressed in terms of altitude and when in terms of Flight Levels – Describe why QNH altimeter setting reports should be provided from sufficient locations – State how a QNH altimeter setting shall be made available to ACFT approaching a controlled 	

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010 06 07 00	<p>AD for landing</p> <ul style="list-style-type: none"> - State under which circumstances the vertical positioning of an ACFT above the Transition Level may be by reference to altitudes (QNH) - Procedures Applicable to Operators and Pilots <ul style="list-style-type: none"> - Name the three different “qualities“ the altitudes or Flight Levels selected for a flight should have - Describe a preflight operational test in case of QNH setting and in case of QFE setting including indication (error) tolerances referred to the different test ranges - State on which setting at least one altimeter shall be set prior to taking off - State where during climb the altimeter setting shall be changed from QNH to Standard - Describe when a pilot of an ACFT intending to land at an AD shall obtain the „number“ of the Transition Level - Describe when a pilot of an ACFT intending to land at an AD shall obtain the actual QNH altimeter setting - State where the altimeter settings shall be changed from Standard to QNH during descent for landing <p><u>Secondary Surveillance RADAR (SSR) Transponder Operating Procedures</u></p>	<p>Rules of the Air, Attachment B - Unlawful Interference In case the ACFT is unable to notify an ATS unit of the unlawful interference</p> <p>Regional Supplementary Procedures</p>

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	<ul style="list-style-type: none"> – Operation of Transponders <ul style="list-style-type: none"> – State when and where the pilot shall operate the transponder provided the ACFT carries a serviceable transponder – State on which mode and code the pilot shall operate the transponder in the absence of any ATC directions or regional air navigation agreements (except in cases of emergency, COM failure or unlawful interference) – Indicate in what circumstances the pilot shall operate the Mode C, unless otherwise directed by ATC, provided the Transponder of the ACFT is equipped with Mode C – State whether or not the pilot shall “SQUAWK IDENT” at his own discretion – Describe the accuracy with which level information shall be given by the pilot in air / ground RTF communications whilst the transponder is operated in Mode C – State to which mode and code a pilot shall set the transponder of his ACFT <ul style="list-style-type: none"> – in a state of emergency or indicating a COM failure – if his ACFT is subject to unlawful interference in flight – Describe the consequences following a transponder failure in flight – State the primary action of the pilot in the case of a unservicable transponder before departure when repair or replacement at the aerodrome of DEP is not possible – Phraseology <ul style="list-style-type: none"> – State how pilots shall acknowledge mode / code setting instructions – Operation of ACAS equipment <ul style="list-style-type: none"> – Define the term “ACAS” – Describe the intention of ACAS indications – Describe what reaction is expected by a pilot who deviates from ATC instructions or the CLR in 	<p>see Doc. 7030</p>

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	<ul style="list-style-type: none"> – State the meaning of the expressions RNP 4, RNP 1 etc. (see also definitions) – Describe the purpose for establishing FICs – State the reason for the establishment of ATC units – Airspace <ul style="list-style-type: none"> – Explain which airspace is included in an FIR – Name the lower limit of a CTA as far as ICAO standards are concerned – State whether or not the lower limit of a CTA has to be established uniformly – Explain why an UIR or Upper CTA should be delineated to include the Upper Airspace within the lateral limits of a number of lower FIR or CTAs – Describe in general the lateral limits of CTRs – State the minimum extension (in NM) of the lateral limits of a CTR – State the upper limits of a CTR located within the lateral limits of a CTA – Minimum Flight Altitudes <ul style="list-style-type: none"> – State who is responsible for MNM Flight Altitudes – Emergencies <ul style="list-style-type: none"> – Describe the operation of a transponder (Mode and Code) in case of distress, emergency or unlawful interference – State on which emergency frequency a pilot can expect the ATS to contact him in case of an interception – Time units <ul style="list-style-type: none"> – Name the time units used by ATS 	

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010 07 01 02	<p><u>Air Traffic Control Service / ATC</u></p> <ul style="list-style-type: none"> - Provision of ATC <ul style="list-style-type: none"> - Name all classes of airspace in which ATC shall be provided - Name the ATS units providing ATC service (ACC, APP, TWR) - Describe which unit(s) may be assigned with the task to provide specified services on the apron - Name the purpose of clearances and information issued by an ATC unit - Describe the aim of clearances issued by ATC with regard to VFR or special VFR flights and refer to different classes of airspace - Separation <ul style="list-style-type: none"> - State how separation between ACFT shall be obtained by an ATC unit - State the ICAO documents in which details of current separation minima are prescribed - Clearances <ul style="list-style-type: none"> - List the various (five possible) parts of an ATC clearance - Describe the various aspects of clearance co-ordination - State how ATC shall react when it becomes apparent that traffic, additional to that one already accepted, can not be accommodated (or only at a given time) - Control of persons and vehicles at aerodromes <ul style="list-style-type: none"> - Explain why the movement of persons, vehicles and towed ACFT on the maneuvering area of an AD shall be controlled by the AD TWR (as necessary) 	
010 07 01 03	<p><u>Flight Information Service / FIS</u></p> <ul style="list-style-type: none"> - Applicability and scope of FIS <ul style="list-style-type: none"> - State for which aircraft FIS shall be provided - State whether or not FIS shall include the provision of pertinent SIGMET and AIRMET information 	

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JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
010 07 01 04	<ul style="list-style-type: none"> - State which information FIS shall include in addition to SIGMET and AIRMET information - Indicate which other information the FIS shall include in addition to the special information given in ANNEX 11 - Operational FIS broadcasts <ul style="list-style-type: none"> - Name the three major types of operational FIS broadcasts - Give the meaning of the acronym ATIS in plain language - Show that you are acquainted with the basic conditions for transmitting an ATIS as indicated in ANNEX 11 - Mention the four possible messages - List the basic information concerning ATIS broadcasts (e.g. frequencies used, number of ADs included, updating, identification, acknowledgment of receipt, language and channels, ALT setting) - Alerting Service <ul style="list-style-type: none"> - Indicate the ACFT to which alerting service shall be provided - Name the unit which shall be notified by the responsible ATS unit immediately an ACFT is considered to be in a state of emergency - Name the three stages of emergency and describe the basic conditions for each kind of emergency - Show knowledge of the meaning of the expressions INCERFA, ALERFA and DETRESFA - Describe limiting conditions for the information of ACFT in the vicinity of an ACFT being in a state of emergency 	
010 07 01 05	<ul style="list-style-type: none"> - Appendix 1 to ANNEX 11 <ul style="list-style-type: none"> - Describe the reason for establishing a system of route designators and required navigation performance (RNP) - State whether or not a prescribed RNP type is considered an integral part of the ATS route 	

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
	<p>designator</p> <ul style="list-style-type: none"> - Show general knowledge of the composition of an ATS route designator <p>- Appendix 4</p> <ul style="list-style-type: none"> - Show knowledge of all information concerning ATS airspace classification (as described in Appendix 4 to ANNEX 11) <p><u>Rules of the air and air traffic service – Doc 4444 - RAC / 501/11</u></p> <ul style="list-style-type: none"> - Essential Definitions <ul style="list-style-type: none"> - Explain in plain language, the meaning of the abbreviation “PANS-RAC”. - Recall all definitions given in Doc 4444 to such an extent that you can choose the correct one from a series of offered samples except the following: <ul style="list-style-type: none"> accepting unit / controller, AD taxi circuit, aeronautical fixed service (AFS), aeronautical fixed station, air-taxiing, allocation, approach funnel, assignment, data convention, data processing, discrete code, D-value, flight status, ground effect, normal operating zone (NOZ), no transgression zone, receiving unit / controller, sending unit / controller, transfer of control point, transferring unit / controller, unmanned free balloon - Relationship to other documents <ul style="list-style-type: none"> - Describe the relationship between Doc 4444 and other documents <p>General Provisions</p> <ul style="list-style-type: none"> - State whether or not the procedures described in Doc. 4444 are directed exclusively to ATS services personnel - State how a flight plan should be submitted prior to DEP and to which ATS unit it should normally be delivered - State, for a controlled or an uncontrolled flight for which a flight plan has been submitted, the delay 	<p>Doc. 7030 - Regional Supplementary Procedures)</p>

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
	<p>after which a flight plan shall be amended or a new flight plan filed</p> <ul style="list-style-type: none"> - Explain <ul style="list-style-type: none"> - what kind of known traffic conditions are the basis for ATC clearances - the procedures when an ATC clearance is not suitable to the PIC of an ACFT - the general aim for the issuance of ATC clearances by air traffic services units - how a PIC (or an operator) may be involved if traffic, additional to that already accepted, can not be accommodated within a given period of time - Describe the complete ALT setting procedures, which include <ul style="list-style-type: none"> - Expressing the vertical position of an ACFT in the vicinity of an AD - Defining the expressions Transition Level and Transition Altitude (see definitions) - Indicating the terms used when ascending or descending through the Transition Layer - Describing the reasons which call for the expression of the vertical position of the ACFT in terms of height above THR ELEV - Stating how the vertical position of an ACFT shall be expressed in case of en route flights - Mentioning who shall establish the Transition Level to be used in the vicinity of the relevant AD - Explaining the term "Transition Level / TL" - Stating whether or not the pilot can request the TL to be included in the APP CLR - Describing when QNH ALT setting will be given to arriving or departing ACFT - Stating when the QFE shall not refer to the AD ELEV - Stating whether or not the ALT setting is rounded up and if so to what extent this is done - Describe to what class of ACFT the term "Heavy" included in an initial RTF MSG is applicable - State where the specifications for wake turbulence categories can be found 	

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
010 07 03 00	<ul style="list-style-type: none"> – Describe where position reports shall be made on routes defined by designated significant points – Describe the contents of position reports as well as the possible exceptions pending upon regional air navigation agreements or when using SSR Mode C – Explain the meaning of the abbreviation ADS – Describe how ADS reports shall be made – State to which unit an ADS report shall be made – Explain the meaning of the code word AIRPROX – Describe when an Air Traffic Incident Report / ATIR has to be established and to whom it should be submitted – Explain the meaning of the abbreviation “ACAS“ – Describe the difference in providing air traffic services to ACFT equipped with ACAS and to ACFT not equipped with ACAS – Report how ATC controllers will normally be informed about the ACAS capability of an ACFT <p><u>Rules of the air and air traffic service – Doc 4444 - RAC / 501/11</u></p> <p>(Differences in Doc. 7030 - Regional Supplementary Procedures)</p> <ul style="list-style-type: none"> – Explain in plain language, the meaning of the abbreviation “PANS-RAC“. – Essential Definitions <ul style="list-style-type: none"> – Recall all definitions given in Doc 4444 to such an extent that you can choose the correct one from a series of offered samples except the following: <ul style="list-style-type: none"> accepting unit / controller, AD taxi circuit, aeronautical fixed service (AFS), aeronautical fixed station, air-taxiing, allocation, approach funnel, assignment, data convention, data processing, discrete code, D-value, flight status, ground effect, normal operating zone (NOZ), no transgression zone, receiving unit / controller, sending unit / controller, transfer of control point, 	

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
010 07 03 01	<p style="text-align: center;">transferring unit / controller, unmanned free balloon</p> <ul style="list-style-type: none"> - Relationship to other documents - Describe the relationship between Doc 4444 and other documents <p>General Provisions</p> <ul style="list-style-type: none"> - State whether or not the procedures described in Doc. 4444 are directed exclusively to ATS services personnel - State whether or not a clearance issued by ATC units does include prevention of collision with terrain and if there is one exception to this. Name this exception - State how a flight plan should be submitted prior to departure and to which ATS unit it should normally be delivered - State, for a controlled or an uncontrolled flight for which a flight plan has been submitted, the delay after which a flight plan shall be amended or a new flight plan filed - Explain <ul style="list-style-type: none"> - how the change from IFR to VFR can be initiated by a PIC - how the appropriate ATS unit shall reply upon a request for a change from IFR to VFR - what kind of known traffic conditions are the basis for ATC clearances - the procedures to be followed or to be expected when an ATC clearance is not suitable to the PIC of an ACFT - the general aim for the issuance of ATC clearances by air traffic services units - how a PIC (or an operator) may be involved if traffic, additional to that already accepted, can not be accommodated within a given period of time - Describe the complete ALT setting procedures, which include <ul style="list-style-type: none"> - Expressing the vertical position of an ACFT in the vicinity of an AD 	

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
	<ul style="list-style-type: none"> – Defining the expressions transition level and transition altitude (see definitions) – Indicating the expression of vertical position when ascending or descending through the transition layer – Describing the reasons which call for the expression of the vertical position of the ACFT in terms of height above THR ELEV – Stating how the vertical position of an ACFT shall be expressed in case of en route flights – Mentioning who shall establish the transition level to be used in the vicinity of the relevant AD – Explaining the term “Transition Level / TL“ – Stating whether or not the pilot can request the TL to be included in the APP CLR – Describing when QNH ALT setting will be given to arriving or departing ACFT – Stating when the QFE shall not refer to the AD ELEV – Stating whether or not the ALT setting is rounded up and if so to what extent this is done – Describe when and where the term “Heavy“ shall be included in an initial RTF message and to what class of ACFT it is applicable – State where the specifications for wake turbulence categories can be found – Explain the meaning of the abbreviation “MLS“ – State when the appropriate MLS capability designator shall be included in RTF contact – Describe where position reports shall be made on routes defined by designated significant points – Describe the contents of position reports as well as the possible exceptions pending upon regional air navigation agreements or when using SSR Mode C – Explain the meaning of the abbreviation ADS – Describe how ADS reports shall be made 	

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
010 07 03 02	<ul style="list-style-type: none"> - State to which unit an ADS report shall be made - Explain the meaning of the code word AIRPROX - Describe when an Air Traffic Incident Report / ATIR has to be established and to whom it should be submitted - Explain the meaning of the abbreviation "ACAS" - Describe the difference in providing air traffic services to ACFT equipped with ACAS and to ACFT not equipped with ACAS - Report whether or not ATC controllers will normally be informed about the ACAS capability of an ACFT <p><u>Area Control Center / ACC</u></p> <ul style="list-style-type: none"> - General provisions for the separation of controlled traffic <ul style="list-style-type: none"> - Name the two basic kinds of separation used in aviation - Discriminate the type of separation provided within the various classes of airspace <ul style="list-style-type: none"> - between flights of all types of flight rules - between flights according to IFR and flights according to VFR - between flights according to IFR and flights according to Special VFR - between Special VFR flights - Vertical separation <ul style="list-style-type: none"> - Describe how vertical separation is obtained - State the required vertical separation minimum - Describe how minimum flight altitudes and lowest usable Flight Levels correspond to each other - Describe how the cruising levels of ACFT flying to the same destination at the expected approach sequence are correlated between each other 	

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
	<ul style="list-style-type: none"> – Name the conditions that must be adhered to, when two ACFT are cleared to maintain a specified vertical separation between them during climb or descent – Horizontal separation <ul style="list-style-type: none"> – List the two main methods for horizontal separation – Describe how lateral separation of ACFT at the same level may be obtained – Explain the term “Geographical Separation“ – Describe track separation between ACFT using the same navigation aid or method – Describe the three basic means for the establishment of longitudinal separation – Reduction in separation <ul style="list-style-type: none"> – Describe the circumstances under which a reduction in separation minima may be allowed – ATC Clearances <ul style="list-style-type: none"> – State why ATC clearances must be issued “early enough“ to en-route ACFT – Prove that you are acquainted with the required contents of a clearance as given in DOC 4444 of ANNEX 11 – Define the term “clearance limit“ – Explain the meaning of the following terms: “cleared via flight planned route“, “cleared via (designation) departure” and “cleared via (designation arrival)“ – State whether or not a clearance for a controlled flight can only concern level flight, climb or descent whilst maintaining own separation in VMC – Explain the meaning of the term “essential traffic“ – List the content of essential traffic information – State whether in case of a level change en-route if more than one level has been given in the original flight plan all levels shall be included in the re-clearance or only the changed level 	<p>DOC 4444 Part IX Section 4.2.5.2.1 or ANNEX 11, Chapter 3 Section 3.7.1.1</p>

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
010 07 03 03	<p>Emergency and communication failure</p> <ul style="list-style-type: none"> - State the Mode and Code of SSR equipment a pilot might operate in a (general) state of emergency or (specifically) in case the ACFT is subject to unlawful interference - state the special rights an ACFT in a state of emergency can expect from ATC - Describe the expected action of ACFT after receiving a broadcast from ATS concerning the emergency descent of an ACFT - State how it can be ascertained, in case of a failure of two-way communication, whether the ACFT is able to receive transmissions from the ATS unit - Explain the assumption based on which separation shall be maintained if an ACFT is known to have COM failure in VMC - State on which frequencies appropriate information, for an ACFT encountering two way COM failure, will be sent by ATS - Describe the expected activities of an ATS-unit after having learned that an aircraft is being intercepted in or outside ist area of responsibility <p><u>Approach Control Service / APP</u></p> <ul style="list-style-type: none"> - Departing ACFT <ul style="list-style-type: none"> - Describe <ul style="list-style-type: none"> - the essential content of an Air Traffic Control CLR for departing ACFT - the considerations the PIC has to make whenever ATC gives a take-off direction other than into the wind - Mention the kind of significant changes in the MET conditions in the take-off or climb-out area that should be transmitted to a departing ACFT without delay 	

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
	<ul style="list-style-type: none"> – List the information in addition to MET conditions which shall be transmitted to departing ACFT – Arriving ACFT <ul style="list-style-type: none"> – State where arriving aircraft may be required to report to enable ATC to expedite departing ACFT – Explain the meaning of the term “Visual Approach“ – Inform about the required provisions to perform a visual approach – Indicate if separation will be provided between an ACFT performing a visual approach and other arriving and departing ACFT – Define the term “Ceiling“ – State the primary requirement for the execution of a visual approach and for the issuance of the appropriate CLR – Describe what conditions must be met concerning the reported ceiling if a visual approach is planned – State in which situations an ACFT may be given a special priority with regard to the APP sequence – Name two alternative ways to issue an appropriate clearance to an aircraft within an approach sequence if the pilot indicates his intention to hold for weather improvement or for other reasons, when other holding aircraft indicate their intention to continue their approach-to-land – Define the term “expected approach time (EAT)” and explain the difference to the “estimated time of arrival (ETA)” – State the reason for determining an EAT and state the time involved – Name the anticipated delay which causes a revised EAT to be forwarded – List the four main groups of information which shall be transmitted to the ACFT as early as practicable after communication has been established with the unit providing APP control service – Define the term “final approach“ 	

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
010 07 03 04	<ul style="list-style-type: none"> - List the three main groups of information which shall be transmitted to the ACFT at the commencement of final approach - List the five main groups of information which shall be transmitted without delay to an ACFT on final approach <p><u>Aerodrome Control Service</u></p> <ul style="list-style-type: none"> - Function of an Aerodrome Control Tower <ul style="list-style-type: none"> - General <ul style="list-style-type: none"> - Describe the general task of a TWR with regard to issuing information and CLR to ACFT under its control - List for which ACFT and their given positions or flight situations TWRs shall prevent collisions - Name the AD equipment the operational failure or irregularity of which shall be immediately reported by the TWR - State that, in case that an ACFT does not land within a certain period of time, the TWR shall report to the ACC or FIC. State the duration of that period of time - Describe the procedures to be observed by the TWR whenever VFR operations are suspended - Selection of RWY in use <ul style="list-style-type: none"> - Explain the term "RWY-in-use" - State the reasons which could eventually lead to the decision to use another TKOF or landing direction than the one into the wind - Name the possible consequences for a PIC if the "RWY-in-use" is not considered suitable for the operation involved - Information to ACFT by TWR <ul style="list-style-type: none"> - List the series of information TWRs should give to ACFT - Prior to taxi for take off 	

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
010 07 03 05	<p>Prior to take off Prior to enter the traffic circuit</p> <ul style="list-style-type: none"> - Control of aerodrome traffic / Circuit <ul style="list-style-type: none"> - State who is responsible for the avoidance of collision with other ACFT when operating in VMC - Explain the term “essential local traffic“ - Give examples of essential information on AD conditions as listed in Doc. 4444 - State the sequence of priority between ACFT landing (or in the final stage of an approach to land) and ACFT intending to depart - Indicate the order in which departures normally shall be cleared - State three basic conditions that must be fulfilled before a departing ACFT will normally be permitted to commence take off - Describe the required action when, in the interest of expediting traffic, a “clearance for immediate take-off“ has been issued to an ACFT before it enters the RWY - State the three basic conditions that must be fulfilled before a landing ACFT will normally be permitted to cross the beginning of the RWY on its final approach - List the three categories of ACFT on which wake turbulence separation minima are based - State the minimum ground visibility required for the authorization of a special VFR flight to enter a CTR for the purpose of landing or to take off and depart directly from a CTR - State the MNM ground visibility required for the authorization of a Special VFR flight to operate locally within a CTR <p><u>FIS and Alerting Service</u></p> <ul style="list-style-type: none"> - Define the term “Air Traffic Advisory Service“ - Describe the objective of the air traffic advisory service - State to which ACFT air traffic advisory service will be provided 	Doc. 4444 Part V, Section 8

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
010 07 03 06	<ul style="list-style-type: none"> – Explain why air traffic advisory service does not deliver “Clearances“ but only “Advisory Information“ – Describe the various aspects of the “Alerting Service“ <p>Radar Services</p> <ul style="list-style-type: none"> – State to what extent the use of radar in air traffic services may be limited – State what radar derived information shall be available for display to the controller as a minimum – Define the term “SSR“ – State the SSR Codes reserved for emergency, COM failure or unlawful interference – Name the two basic identification procedures used with radar – Define the term “PSR“ – Describe the circumstances under which an aircraft provided with radar service should be informed of its position – List the possible forms of position information passed to the aircraft by radar services – Define the term “radar vectoring“ – State how radar vectoring shall be achieved – Describe the information which shall be given to an aircraft when radar vectoring is terminated and the pilot is instructed to resume own navigation – State the aims of radar vectoring as shown in Doc. 4444 – Indicate the standard horizontal radar separation in NM – State the wake turbulence radar separation for ACFT in the APP and DEP phases of a flight when an ACFT is operating directly behind another ACFT at the same ALT or less than 300 m (1000 ft) below – Describe what kind of action (concerning the transponder) the pilot is expected to perform in case of emergency if he has previously been directed by ATC to operate the transponder on a specific code 	<p>Doc 4444 Part VI Sect 2.1</p> <p>Doc. 4444, Part VI, Section 7.1</p>

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
010 08 00 00	<u>AERONAUTICAL INFORMATION SERVICE / AIS ANNEX 15</u>	
010 08 01 00	<ul style="list-style-type: none"> – Introduction <ul style="list-style-type: none"> – State (in general) the object of the AIS – Name the three most important implementations in air navigation which have significantly changed the role and importance of aeronautical information/data within recent years – Essential Definitions <ul style="list-style-type: none"> – Recall the following definitions to such an extent that you can choose the correct one from an offered series of samples: Aeronautical information circular (AIC), aeronautical information publication (AIP), AIP amendment, AIP supplement, AIRAC, danger area, integrated aeronautical information package, international airport, international NOTAM office, manoeuvring area, movement area, NOTAM, pre-flight information bulletin (PIB), prohibited area, restricted area, SNOWTAM – General <ul style="list-style-type: none"> – State during which period of time an AIS shall be available with reference to an ACFT flying in the area of responsibility of an AIS, provided a 24-hours service is not available – Name (in general) the kind of aeronautical information / data which an AIS service shall make available in a suitable form for flight crews – Summarize the duties of an aeronautical information service concerning aeronautical information data for the territory of the State – Give a brief statement about the WGS 84 system – Aeronautical Information Publications (AIP) <ul style="list-style-type: none"> – State the primary purpose of the AIP – List the main parts of an AIP – Name that chapter of the AIP in which the pilot can find a List of significant differences between the national regulations and practices of the State and the related ICAO Standards, Recommended 	WGS 84

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
	<p>Practices and Procedures</p> <ul style="list-style-type: none"> – State how permanent changes to the AIP shall be published – Explain what kind of information shall be published in form of AIP Supplements – Describe how conspicuousness of AIP Supplement pages is achieved <p>– NOTAM</p> <ul style="list-style-type: none"> – Describe how information shall be published which in principal would belong to NOTAMs but includes extensive text and/or graphics – Summarize essential information which lead to the issuance of a NOTAM – Summarize information which should not be notified by NOTAMs – State to whom NOTAMs shall be distributed – Explain how information regarding snow, ice and standing water on AD pavements shall be reported – State which information an ASHTAM may contain – Describe the means by which NOTAMs shall be distributed <p>– Aeronautical Information Regulation and Control (AIRAC)</p> <ul style="list-style-type: none"> – List circumstances to which information are concerned which shall or should be distributed as AIRAC – State the sequence in which AIRACs shall be issued and state how many days in advance of the effective date the information shall be distributed by AIS <p>– Aeronautical Information Circulars (AIC)</p> <ul style="list-style-type: none"> – Describe reasons for the publication of AIC <p>– Pre-flight and Post-flight Information</p> <ul style="list-style-type: none"> – List (in general) which details shall be included in aeronautical information provided for pre-flight planning purposes at the appropriate ADs – Summarize the additional current information relating to the AD of departure that shall be provided as pre-flight information 	<p>ANNEX 15, Appendix 4, Part 1 and Part 2)</p> <p>ANNEX 15, Chapter 7</p>

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
010 09 01 00	<p><u>Essential Definitions</u></p> <ul style="list-style-type: none"> – Recall the following definitions in ANNEX 14 to such an extent that you can choose the right one from a series of offered samples, except the following: <ul style="list-style-type: none"> Accuracy, aircraft classification number, cyclic redundancy check, data quality, effective intensity, ellipsoid height (geodetic height), geodetic datum, geoid, geoid undulation, integrity (aeronautical data), light failure, lighting system reliability, orthometric height, station declination, usability factor – Reference Code <ul style="list-style-type: none"> – Describe, in general terms, the intent of the AD reference code as well as its composition of two elements 	
010 09 01 01	<p><u>Aerodrome Data</u></p> <ul style="list-style-type: none"> – Conditions of the movement area and related facilities <ul style="list-style-type: none"> – List the four most important declared RWY distances and recall the appropriate definitions – List the matters of operational significance or affecting ACFT performance which should be reported to AIS and ATS units for the transmission to ACFT involved – Describe the four different types of water deposit on the RWY – Name the three defined states of frozen water on the RWY – Physical Characteristics of ADs <ul style="list-style-type: none"> – Define the term “RWY strip“ – State the length, width and grading of RWY strips – Define the term “RWY end safety area“ – State the length and width of a RWY end safety area – Define the term “Clearway“ – State the origin, length and width of a clearway 	

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
010 09 01 02	<ul style="list-style-type: none"> - Define the term "Stopway" - State the width of a „Stopway“ - Describe where a radio-altimeter operating area should be established and how far it should extend laterally and longitudinally - State the reason for a taxiway widening in curves - Explain when holding bays should be provided - Describe where taxi-holding positions shall be established - Define the term "road-holding position" <p><u>Visual Aids for Navigation</u></p> <ul style="list-style-type: none"> - Indicators and Signalling Devices <ul style="list-style-type: none"> - Describe the wind direction indicators with which ADs shall be equipped - Describe a landing direction indicator - Explain the capabilities of a signalling lamp - State which characteristics a signal area should have - Markings <ul style="list-style-type: none"> - Name the colours used for the various markings (RWY, TWY, ACFT stands, apron safety lines) - State where a RWY designation marking shall be provided and how it is designed - Describe the application, location and characteristics of <ul style="list-style-type: none"> RWY centre line marking, THR marking, aiming point marking, TDZ marking, RWY side stripe marking, TWY centre line marking, taxi-holding position marking, TWY intersection marking, ACFT stand markings, apron safety lines, road holding position marking, information marking - Lights 	

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
	<ul style="list-style-type: none"> – Describe mechanical safety considerations regarding elevated approach lights and elevated RWY-, stopway- and taxiway-lights – Discuss the relationship of the intensity of RWY lighting, the approach lighting system and the use of a separate intensity control for different lighting systems – List the conditions for the installation of an AD beacon and describe its general characteristics – Name the different kinds of operations for which a simple APP lighting system shall be used – Describe the basic installations of a simple APP lighting system including the dimensions and distances normally used – Describe the principle of a precision APP category I lighting system including such informations as location and characteristics – Describe the wing bars of PAPI and APAPI – Describe what the pilot will see during approach, using PAPI or APAPI – Name application, location and characteristics of: <ul style="list-style-type: none"> RWY edge lights, RWY threshold and wing bar lights, RWY end lights, RWY centre line lights, RWY touchdown zone lights, stopway lights, taxiway centre line lights, taxiway edge lights, stop bars, taxiway intersection lights, RWY guard lights, road holding position lights <p>Knowledge about light spacing is not required</p> <ul style="list-style-type: none"> – Signs <ul style="list-style-type: none"> – State the general purpose for installing signs – Explain what signs are the only ones on the movement area utilizing red – List the provisions for illuminating signs – State the purpose for installing mandatory instruction signs 	

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
	<ul style="list-style-type: none"> – Name the kind of signs which “mandatory instruction signs“ shall include – Describe by which sign a pattern “A“ taxi-holding position (i.e. at an intersection of a taxiway and a non-instrument, non-precision approach or take-off RWY) marking shall be supplemented – Describe by which sign a pattern “B“ taxi-holding position (i.e. at an intersection of a taxiway and a Precision approach Category I, II or III RWY) marking shall be supplemented – Describe the location of a RWY designation sign at a taxiway / RWY intersection, of a NO ENTRY sign and a category I, II or III holding position sign – Name the sign with which it shall be indicated that a taxiing ACFT is about to infringe an obstacle limitation surface or to interfere with the operation of radio navigation aids (e.g. ILS/MLS critical / sensitive area) – Name the colours used with a mandatory instruction sign – Describe the various possible inscriptions on RWY designation signs and on holding position signs (Category I, II, III or joint Category II/III) – Describe the inscription on a taxi-holding position sign “en-route“ on a taxiway (i.e. other than a taxiway / RWY-, RWY / RWY- or taxiway / taxiway-intersection) – State when information signs shall be provided – State the role of “information signs“ – Describe the colours used with information signs – Describe the possible inscriptions on information signs – Explain application, location and characteristics of aircraft stand identification signs and of road-holding position signs – Markers – Describe the following: <ul style="list-style-type: none"> Markers used to delimit a RWY when no lights are provided, Application, location and characteristics (especially colour) of unpaved RWY edge markers, TWY edge markers, TWY 	

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
010 09 01 03	<p style="text-align: center;">centre line markers, unpaved TWY edge markers, boundary markers</p> <p><u>Visual aids for denoting obstacles</u></p> <ul style="list-style-type: none"> - Marking of Objects <ul style="list-style-type: none"> - State how fixed or mobile objects shall be marked if colouring is not practicable - Describe marking by colours (fixed or mobile objects) - Explain the use of markers for the marking of objects, overhead wires, cables etc. - Explain the use of flags for the marking of objects - Lighting of objects <ul style="list-style-type: none"> - Name the different types of lights to indicate the presence of objects which must be lighted - State the time period/s of the 24 hours of a day during which high-intensity lights are intended for use - Describe (in general terms) the location of obstacle lights - Describe (in general and for normal circumstances) colour and sequence of low-intensity obstacle lights, medium-intensity obstacle lights and high-intensity obstacle lights - State where you can find information about lights to be displayed by ACFT 	
010 09 01 04	<p><u>Visual Aids for Denoting Areas of Restricted Use</u></p> <ul style="list-style-type: none"> - Describe (in general) closed markings on RWYs and taxiways or portions thereof (including colours) - State how the pilot of an ACFT moving on the surface of a taxiway, holding bay or apron shall be warned that the shoulders of these surfaces are “non-load-bearing” - Describe the pre-threshold marking (including colours) when the surface before the threshold is not suitable for normal use by ACFT 	

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
010 09 01 05	<p><u>Emergency and other services</u></p> <ul style="list-style-type: none"> - Name the principal objective of a rescue and fire fighting service - List the most important factors bearing on effective rescue in a survivable ACFT accident - Explain the basic information the AD category (for rescue and fire fighting) depends upon - Describe what is meant by the term “response time“ and state its normal and maximum limits - State the reasons for emergency access roads and for satellite fire fighting stations - Describe the reason for providing a special apron management service and state what has to be observed if the AD control tower is not participating in the apron management service - State who has a right of way against vehicles operating on an apron - Describe the actions ground servicing of an ACFT with regard to possible event of a fuel fire - Describe what minimum distance an isolated ACFT parking position (after the ACFT is subject of unlawful interference) should have from other parking positions, buildings or public are 	
010 09 01 06	<p><u>Attachment A to ANNEX 14</u></p> <ul style="list-style-type: none"> - Calculation of declared distances <ul style="list-style-type: none"> - List the four types of “declared distances” on a runway and also the appropriate abbreviations - Explain the circumstances which lead to the situation that the four declared distances on a runway are equal to the length of the runway - Describe the influence of a clearway, stopway and/or displaced threshold upon the four “declared distances“ - Radio altimeter operating area 	

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
010 10 00 00	<ul style="list-style-type: none"> - Describe purpose, physical characteristics, dimensions and position of a radio altimeter operating area - Approach lighting systems <ul style="list-style-type: none"> - Name the two main groups of approach lighting systems - Describe the two different versions of a simple approach lighting system - Describe the two different basic versions of precision approach lighting systems for CAT 1 <p>Describe how the arrangement of an approach lighting system and the location of the appropriate threshold are interrelated between each other</p> <p><u>FACILITATION ANNEX 9</u></p> <ul style="list-style-type: none"> - Foreword <ul style="list-style-type: none"> - Explain the aim of ANNEX 9, as indicated in the foreword - Essential Definitions <ul style="list-style-type: none"> - Recall the following definitions to such an extent that you can choose the correct one from a series of offered samples: Aircraft equipment, airline, airline and operator's documents, baggage, cargo, crew member, flight crew member, ground equipment, international airport, pilot-in-command, State of registry 	<p>Annex 9, Art. 37, 22 ICAO-Convention, 23</p>
010 10 01 00	<p><u>Entry and departure of ACFT</u></p> <ul style="list-style-type: none"> - Describe, purpose and use of ACFT documents - as far as the "General declaration" is concerned - State whether or not a "General Declaration" will be required by an ICAO Contracting State under normal circumstances 	

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
010 10 02 00	<ul style="list-style-type: none"> – State the kind of information to be given by crew members whenever a “General Declaration“ is required by a Contracting State <p><u>Entry and departure of persons and their baggage</u></p> <ul style="list-style-type: none"> – Requirements and procedures only as far as the crew and other operators personnel are concerned <ul style="list-style-type: none"> – Explain the reasons for the use of Crew Member Certificates / CMC for flight crews and cabin attendants engaged in International Air Transport – Explain in which cases ICAO Contracting States shall accept the CMCs as an identity document instead of a passport or visa – State whether the entry-privileges for crews of scheduled international air services can be extended to other flight crews of ACFT operated for remuneration or hire but not engaged in scheduled International Air Services 	
010 11 00 00	<u>SEARCH AND RESCUE / SAR (Based on ANNEX 12)</u>	
010 11 01 00	<p><u>ANNEX 12</u></p> <ul style="list-style-type: none"> – Essential Definitions <ul style="list-style-type: none"> – Recall the following definitions to such an extent that you can choose the correct one from a series of offered samples <ul style="list-style-type: none"> alert phase, distress phase, emergency phase, operator, pilot-in-command, radio direction-finding station, rescue co-ordination center, rescue unit, State of registry, uncertainty phase 	
010 11 01 01	<p><u>Organisation</u></p> <ul style="list-style-type: none"> – Establishment of SAR regions and service units 	

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
010 11 01 02	<ul style="list-style-type: none"> – Describe the areas within which SAR services shall be established from ICAO contracting States – State the period of time per day within which SAR services shall be available – State who delineates SAR regions – Describe for which areas rescue coordination centers shall be established <p><u>Co-operation</u></p> <ul style="list-style-type: none"> – Co-operation between States and services – Describe why contracting States should develop common SAR procedures – State why contracting States shall arrange for all ACFT, vessels and local services and facilities which do not form part of the SAR organisation to co-operate fully with the latter 	
010 11 01 03	<p><u>Operating Procedures</u></p> <ul style="list-style-type: none"> – State how long a PIC who observes that either another ACFT or a surface craft is in distress should keep the „craft in distress“ in sight. – List the information a PIC shall report to the rescue co-ordination centre or air traffic services unit when he observes that another ACFT or a surface craft is in distress – Describe the duties of the first ACFT reaching the scene of an accident (and not being a SAR ACFT) with regard to all other ACFT subsequently arriving at the scene of distress 	
010 11 01 04	<p><u>Search and rescue signals</u></p> <ul style="list-style-type: none"> – Describe the required reaction of a PIC of an ACFT whenever a distress signal and / or message or equivalent transmission is intercepted by RTF or radiotelegraphy – Show knowledge of all SAR signals 	Annex 12

**INSTRUMENT RATING (A)
(AIR LAW)**

JAR-FCL REF NO	LEARNING OBJECTIVES	REMARKS
010 13 00 00	<u>AIRCRAFT ACCIDENT AND INCIDENT INVESTIGATION</u>	Appendix A
010 14 00 00	<u>JAR-FCL 1 and 3</u> see 010 04 00 ICAO (Annex 1) – National Law Learning objectives with reference to National Law will be published after decision of the JAR-FCL C	based on ANNEX 13