CHAPTER 17: DETAILED THEORETICAL KNOWLEDGE SYLLABUS AND LEARNING OBJECTIVES
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Introduction
1 - This subject is primarily based on ICAO documentation but will refer to European documentation such as that published by JAA or EASA where relevant.
2 - Exam questions that may otherwise be ambiguous will be qualified to specify the regulatory documentation eg ICAO, JAA or EASA.
2 - National Law is not taken into account but remains relevant during practical training and operational flying.
3 - Abbreviations used are ICAO abbreviations listed in ICAO Doc 8400, Abbreviations and Codes.
4 - Where a Learning Objective (LO) refers to a definition eg 'Define the following terms' or 'Define and understand' or 'Explain the definitions in …', candidates are also expected to be able to recognise a given definition.

		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
010 00 00 00	**AIR LAW**						
010 01 00 00	**INTERNATIONAL LAW: CONVENTIONS, AGREEMENTS AND ORGANISATIONS**						
010 01 01 00	**The Convention on International Civil Aviation (Chicago) – ICAO DOC 7300**						
LO	Explain the Historical background that led to the establishment of the Convention on International Civil Aviation, Chicago, December 7. 1944.	x	x	x	x	x	
010 01 01 01	Part I - Air Navigation						
LO	Be familiar with the general contents of relevant parts of the following Chapters: - general principles and application of the Convention - flight over territory of contracting States - nationality of aircraft - measures to facilitate air navigation - conditions to be fulfilled with respect to aircraft - international standards and recommended practices. - notification of differences - validity of endorsed certificates and licences	x	x	x	x	x	

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	General principles Describe the application of the following terms in Civil Aviation: Sovereignty, Territory, High Seas, according to the UN Convention of the High Seas	x	x	x	x	x	
LO	Define the following terms and explain how they apply to the Law of Nations (International Law): right of non-scheduled flight (including the two technical freedoms of the air), scheduled air services, cabotage, landing at customs airports, applicability of air regulations, rules of the air, search of aircraft.	x	x	x	x	x	
LO	Describe the duties of ICAO Member States in relation to: documents carried in aircraft; certificate of registration, certificates of airworthiness, licenses of personnel; recognition of certificates and licenses, cargo restrictions, photographic apparatus;	x	x	x	x	x	
LO	International standards and recommended practices Explain the obligations of each ICAO Member State towards: Adoption of international standards and procedures; departure from international standards and procedures; notification of differences, endorsements of certificates and licenses, validity of endorsed certificates and licenses	x	x	x	x	x	
010 01 01 02	Part II The International Civil Aviation Organisation (ICAO):						
LO	Describe the aims and objectives of ICAO.	x	x	x	x	x	
LO	Describe and explain the Structure of the International Civil Aviation Organisation (ICAO)	x	x	x	x	x	
LO	State which parts of ICAO are assembled permanently or periodically.	x	x	x	x	x	
LO	Explain the duties of ICAO Headquarters and Regional offices.	x	x	x	x	x	
LO	Describe the worldwide ICAO regions.	x	x	x	x	x	
LO	Give reasons for the establishment of Regional Supplementary Procedures	x	x	x	x	x	
LO	Give reasons for the establishment of the (18) ANNEXES to the Convention.	x	x	x	x	x	
LO	Give a brief summary of the contents of the 18 Annexes to the Chicago Convention.	x	x	x	x	x	

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Be familiar with the hierarchy of ICAO publications.	x	x	x	x	x	
010 01 02 00	**Other Conventions and Agreements**						
010 01 02 01	The International Air Services Transit Agreement (ICAO Doc. 7500)						
LO	Explain the two technical freedoms of the air and their effect on international scheduled flights.	x	x	x	x	x	
010 01 02 02	The International Air Transport Agreement.						
LO	Explain the three commercial freedoms of the air and their effect on international scheduled flights.	x	x	x	x	x	
LO	Describe the political and legal situation of Air Transport in Europe after the establishment of the EU and the subsequent need for the formulation of further “Freedoms of the Air” (6th, 7th, 8th and 9th Freedom).	x	x	x	x	x	
010 01 02 03	Suppression of unlawful acts against the safety of civil aviation; the Conventions of: Tokyo, Den Haag, Montreal						
LO	Explain the facts that led to the Conventions and Supplements against the safety of Civil Aviation	x	x	x	x	x	
LO	Explain the content of the Convention on Unlawful Acts Committed on Board Aircraft. (Doc 8364 - Convention on Offences and Certain Other Acts Committed on Board Aircraft, Tokyo 14.9.1963)	x	x	x	x	x	
LO	Explain the content of the Convention on Suppression of Unlawful Seizure of Aircraft (Doc 8920 - Convention for the Suppression of Unlawful Seizure of Aircraft, Den Haag 16.12.1970 and Protocol for the Suppression of Unlawful Acts against the Safety of Civil Aviation, Montreal 23.9.1971)	x	x	x	x	x	
LO	Explain the content of the Convention on Suppression of Unlawful Acts of Violence at Airports Serving International Civil Aviation in accordance with: - Doc 8966 - Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation, done at Montreal 23.9.1971, signed at Montreal 24.2.1988 - Doc 9518 – Protocol supplementary to the Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation, done at Montreal 23.9.1971, signed at Montreal 24.2.1988)	x	x	x	x	x	

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Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Describe measures and actions to be taken by the PIC of an aircraft in order to suppress Unlawful Acts against the Safety of the aircraft.	x	x	x	x	x	
010 01 02 04	Bilateral Agreements						
LO	Explain the reason for the existence of the ICAO Standard Form for Bilateral Agreements for scheduled Air Transport based on the definitions of the “Freedoms of the Air” as defined in the Air Transit and the Air Transport Agreement. *Remark - Digest of Bilateral Air Transport Agreements, ICAO Doc 9511*	x		x	x		
LO	Explain the influence of the Bermuda agreement on Bilateral Agreements for non-scheduled Air Transport.	x		x	x		
010 01 02 05	Private International law						
LO	Explain the Conventions and Protocols designed to cover liability towards persons and goods in accordance with the Warsaw System as follows: - Convention for the Unification of Certain Rules Relating to International Carriage by Air, Warsaw, October 2. 1929 - Protocol to Amend the Convention for the Unification of Certain Rules Relating to International Carriage by Air, Den Haag, September 28. 1955, cited as the Den Haag Protocol - Convention Supplementary to the Warsaw Convention for the Unification of Certain Rules Relating to International Carriage by Air Performed by a Person other than the Contracting Carrier, Guadalajara September 18. 1961 - Protocol to Amend the Convention for the Unification of Certain Rules Relating to International Carriage by Air, signed at Warsaw on October 12,1929 as Amended by the Protocol, Done at Den Haag on September 28. 1955, signed at Guatemala City on March 8. 1971 - Additional Protocols No.1 - 4 to Amend the Convention for the Unification of Certain Rules Relating to International Carriage by Air, signed at Warsaw on October 12. 1929	x	x	x	x	x	
LO	Explain the legal significance of the issue of a passenger ticket and/or baggage/cargo documents	x	x	x	x	x	
LO	Describe the consequences for an airline and/or the PIC when a passenger ticket is not issued	x	x	x	x	x	

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Describe the situation subsequent to the implementation of the IATA Intercarrier Agreement of Kuala Lumpur, October 31.1995.	x	x	x	x	x	
LO	Explain that the liability towards persons and goods may be unlimited, on the basis of the Montreal Convention, May 28, 1999	x	x	x	x	x	
LO	Explain the strict carrier liability for damages of up to 100 000 Special Drawing Rights (SDRs)	x	x	x	x	x	
LO	Appreciate that a document of carriage may be electronic.	x	x	x	x	x	
LO	Explain the liability limit in relation to damage caused by delay to passengers.	x	x	x	x	x	
LO	Explain the liability limit in relation to the destruction, loss, damage or delay of baggage	x	x	x	x	x	
010 01 02 06	Operators' and pilots' liabilities towards persons and goods on the ground, in case of damage and injury caused by the operation of the aircraft *Remark - Rome convention (1952) and Montreal Convention (1978)*						
LO	Explain the Conventions and Protocols designed to cover liability towards persons and goods on the ground on the basis of the following documents: - International Convention for the Unification of Certain Rules Relating to Damage Caused by aircraft to Third Parties on the Surface Rome May 29. 1933 - Protocol supplementing The Convention for the Unification of Certain Rules Relating to Damage caused by aircraft to Third Parties on the Surface. Rome 1933, concluded at Brussels in 1938 - Convention on Damage by Foreign Aircraft to Third Parties on the Surface, signed October 7.1952 - Protocol to Amend the Convention on Damage Caused by Foreign Aircraft to third Parties on the Surface, Signed at Rome on October 7. 1952, Montreal September 23.1978	x	x	x	x	x	
010 01 02 07	The convention of Rome (1933) and other documents related to rights in aircraft.						
LO	Understand the rules relating to international recognition of rights in aircraft in accordance with the Convention on the International Recognition of rights in aircraft, Geneva June 19 1948, ICAO Doc 7620	x	x	x	x	x	
LO	Understand the rules relating to precautionary arrest of aircraft in accordance with the Convention for the Unification of Certain Rules Relating to the Precautionary Arrest of Aircraft, Signed at Rome on 29th May	x	x	x	x	x	

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
	1933						
010 01 03 00	**World Organisations**						
010 01 03 01	The World Trade Organisation (WTO)						
LO	Describe the general organisation and objectives of the WTO.	x		x	x		
010 01 03 02	The International Air Transport Association (IATA)						
LO	Describe the general organisation and objectives of IATA.	x		x	x		
010 01 04 00	**European organisations**						
010 01 04 01	European Aviation Safety Agency (EASA)						
LO	Describe the general organisation and objectives of EASA	x	x	x	x	x	
LO	Describe the role of EASA in European Civil aviation	x	x	x	x	x	
LO	Describę the position of the National Aviation Authorities (NAAs) within the EASA.	x	x	x	x	x	
LO	Explain the development of the principle documents of EASA.	x	x	x	x	x	
LO	Describę the relationship and harmonisation of EASA with other organisations such as ICAO, Regional and National Organisations.	x	x	x	x	x	
010 01 04 02	European Civil Aviation Conference (ECAC)						
LO	Give a brief summary of the history of ECAC	x	x	x	x	x	
010 01 04 03	Joint Aviation Authorities (JAA)						
LO	Explain the reasons for the foundation of the JAA at the Convention of Cyprus on Sept. 11.1990	x	x	x	x	x	
LO	Explain the development of the principle documents of the JAA.	x	x	x	x	x	
LO	Describe the general organisation and objectives of the JAA.	x	x	x	x	x	
LO	Describę the position of National Aviation Authorities (NAAs) within the JAA.	x	x	x	x	x	

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Describe the relationship and harmonisation of the JAA with other International Organisations such as ICAO, regional and national Organisations	x	x	x	x	x	
LO	Explain the reasons for the establishment of the JAR Documents	x	x	x	x	x	
LO	Give an overview of the JAR Publications	x	x	x	x	x	
010 01 04 04	Eurocontrol						
LO	Describe the general organisation and objectives of Eurocontrol	x	x	x	x	x	x
LO	Give the reason for the Convention relating to Co-operation for the Safety of Air Navigation (Eurocontrol Convention Brussels, Dec 13. 1969)	x	x	x	x	x	x
LO	Explain the principles and objectives of the Single European Sky (SES) in accordance with EC 550/2004	x	x	x	x	x	x
010 02 00 00	**AIRWORTHINESS OF AIRCRAFT**						
010 02 01 00	ICAO Annex 8 and EASA Certification Specifications.	x	x	x	x	x	
LO	Explain the definitions in Annex 8.						
LO	Explain how the airworthiness Standards of ICAO Annex 8 and EASA Certification Specifications (CS) are related to aircraft performance.						
LO	State to which aircraft the Standards of Annex 8 and EASA CS shall apply.						
010 02 02 00	Certificate of Airworthiness (C of A)						
LO	State the Issuing Authority for a C of A.	x	x	x	x	x	
LO	State the necessity to have a C of A.	x	x	x	x	x	
LO	State who shall determine the continuity of an aircraft's airworthiness	x	x	x	x	x	
LO	Describe how a Certificate of Airworthiness can be renewed or shall remain valid	x	x	x	x		
010 03 00 00	**AIRCRAFT NATIONALITY AND REGISTRATION MARKS**						

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
010 03 01 00	Definitions in ICAO Annex 7						
LO	Recall the definitions of the following terms: - Aircraft - Heavier-than-Air Aircraft - State of Registry	x	x	x	x	x	
010 03 02 00	Aircraft Nationality, common and registration marks to be used.						
LO	State where aircraft nationality and common marks are used.	x		x			
LO	Explain the combination of nationality and registration marks (sequence, use of hyphen)	x	x	x	x	x	
LO	State who is responsible for assigning registration marks.	x	x	x	x		
LO	State where nationality or Common Marks and Registration Marks shall appear on Heavier than Air Aircraft.						
010 04 00 00	**PERSONNEL LICENSING**						
010 04 01 01	ICAO Annex 1 and JAR-FCL						
LO	Describe the relationship and differences between ICAO Annex 1 and JAR-FCL	x	x	x	x	x	x
010 04 01 02	Definitions in JAR-FCL						
LO	Define the following: Category of aircraft, 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 aircraft.	x	x	x	x	x	x
010 04 01 03	JAR-FCL 1, 2 and 3						
LO	Give a brief summary of the contents of JAR-FCL 1, 2 and 3	x	x	x	x	x	x
LO	Understand the difference between Section 1 and Section 2 material.	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Explain the requirements to act as a flight crew member of a civil aeroplane registered in a JAA Member State	x	x	x	x	x	x
LO	State to what extent JAA Member States will accept licences etc. issued by other JAA Member States	x	x	x	x	x	x
LO	List the maximum period of time for which the different licences may be issued	x	x	x	x	x	x
LO	Describe the two factors that are relevant for the validity of a licence	x	x	x	x	x	x
LO	List the restrictions for licence holders with an age of 60 years or more *Remark – Not IR*	x	x	x	x	x	
LO	Define the term “State of licence Issue“	x	x	x	x	x	x
LO	Explain the term “Normal Residency“ for normal circumstances	x	x	x	x	x	x
LO	Describe the requirements to carry a flight crew licence.	x	x	x	x	x	x
010 04 01 04	Commercial Pilot Licence – CPL						
LO	State the requirements for the issue of a CPL.	x	x	x	x	x	
LO	State the Privileges of a CPL	x	x	x	x	x	
010 04 01 05	Airline Transport Pilot Licence – ATPL						
LO	State the requirements for the issue of an ATPL	x		x	x		
LO	State the Privileges of an ATPL	x		x	x		
010 04 01 06	Ratings						
LO	Explain the requirements for Class Ratings (Aeroplanes only)	x	x				
LO	Explain the requirements for Type Ratings (Not IR)	x	x	x	x	x	
LO	Explain the requirements for Instrument Ratings (ATPL (A), ATPL/IR (H) and IR only)	x		x			x
010 04 01 07	JAR-FCL 3 - Medical Requirements						

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Describe the relevant content of JAR-FCL 3 - Medical Requirements (administrative parts and requirements related to licensing, only)	x	x	x	x	x	x
LO	State the requirement regarding a medical certificate	x	x	x	x	x	x
LO	Name the kind of medical certificate required when exercising the privileges of a CPL or ATPL *Remark – Not IR*	x	x	x	x	x	
LO	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	x	x	x	x	x	x
010 05 00 00	**RULES OF THE AIR**						
010 05 01 01	Essential definitions in Annex 2						
LO	Explain the definitions in Annex 2 except the following: aerobatic flight, air-ground control radio station, air taxiing, flight status, unmanned free balloon	x	x	x	x	x	x
010 05 01 02	Applicability of the Rules of the Air						
LO	Explain to what extent the ICAO Rules of the Air apply in general	x	x	x	x	x	
LO	Explain to what extent the ICAO Rules of the Air apply over the High Seas	x	x	x	x	x	
LO	State the three possible rules which must be complied with on the movement area of an AD or when in flight	x	x	x	x	x	
LO	State who decides about flying IFR or VFR in VMC	x		x			x
LO	State who aboard an aircraft is primarily responsible for the operation of the aircraft in accordance with the Rules of the Air	x	x	x	x	x	
LO	Indicate under what circumstances departure from the Rules of the Air may be allowed	x	x	x	x	x	
LO	Explain the duties of the PIC concerning pre-flight actions in case of an IFR flight	x		x			x
LO	State who has the final authority as to the disposition of the aircraft	x	x	x	x	x	

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Explain the inter-relationship between intoxicating liquor, narcotics or drugs and the assignment to act as a flight crew member	x	x	x	x	x	x
010 05 01 03	General Rules						
LO	Describe the rules for Avoidance of collisions.	x	x	x	x	x	
LO	Describe the lights to be displayed by aircraft.	x	x	x	x	x	
LO	Describe Marshalling Signals	x	x	x	x	x	
LO	State the basic requirements for minimum height over congested areas of cities, towns or settlements or over an open-air assembly of persons	x	x	x	x	x	
LO	Define when the cruising levels shall be expressed in terms of FLs	x	x	x	x	x	
LO	Define under what circumstances cruising levels shall be expressed in terms of altitudes	x	x	x	x	x	
LO	Explain the limitation for proximity to other aircraft and the Rules for the Right-of-Way, including holding at Runway-holding positions and lighted stop bars	x	x	x	x	x	
LO	Describe the significance of Light Signals displayed to and by aircraft	x	x	x	x	x	
LO	Describe the requirements for simulated instrument flights	x		x			x
LO	Indicate the basic rules for an aircraft operating on and in the vicinity of an AD	x	x	x	x	x	
LO	Explain the requirements for the submission of an ATS Flight Plan (FPL) *Remark – The details required to complete an FPL are included in subject 033*	x	x	x	x	x	
LO	Describe the general contents of an ATS Flight Plan (FPL)	x	x	x	x	x	x
LO	Describe the requirement for obtaining a time check before flight.	x	x	x	x	x	x
LO	Explain the considerations concerning changes to an ATS Flight Plan (FPL)	x	x	x	x	x	x
LO	State the flight time deviation for the estimate over the next RP, that must be reported to the appropriate ATS unit	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	State the deviation from the TAS included in an ATS Flight Plan (FPL).to be reported to the appropriate ATS Unit	x	x	x	x	x	x
LO	Describe the possible reasons for not adhering to a current flight plan	x	x	x	x	x	x
LO	Explain the procedures to close an ATS Flight Plan (FPL).	x	x	x	x	x	
LO	Describe which items must be included when closing an ATS Flight Plan (FPL).	x	x	x	x	x	
LO	State for which flights an ATC CLR shall be obtained	x	x	x	x	x	
LO	State how a pilot may request an ATC CLR	x	x	x	x	x	
LO	State the action to be taken if an ATC CLR is not satisfactory to a PIC	x	x	x	x	x	
LO	Describe the required actions to be carried out, if the continuation of a controlled VFR flight in VMC is not practicable anymore	x		x			x
LO	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	x	x	x	x	x	x
LO	Describe the necessary action of an aircraft when experiencing COM failure	x	x	x	x	x	x
LO	State what information an aircraft being subjected to unlawful interference shall give to the appropriate ATS unit	x	x	x	x	x	x
010 05 01 04	Visual Flight Rules (VFR)						
LO	Recall the entire set of Visual Flight Rules as contained in Chapter 4 of ANNEX 2.	x	x	x	x	x	
010 05 01 05	Instrument Flight Rules (IFR)						
LO	Recall the entire set of Instrument Flight Rules as contained in Chapter 5 of ANNEX 2.	x		x			x
010 05 01 06	Interception of Civil Aircraft						
LO	Explain why ICAO urges the Contracting States to apply ICAO recommendations concerning interceptions of civil aircraft in a uniform manner	x	x	x	x	x	

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	State the primary reason for interception of civil aircraft by military aircraft	x	x	x	x	x	
LO	List the possible reasons for intercepting a civil aircraft besides determining its identity	x	x	x	x	x	
LO	State what primary action should be carried out by an intercepted aircraft	x	x	x	x	x	
LO	State which FREQ should primarily be tried in order to contact the intercepting aircraft	x	x	x	x	x	
LO	State on which Mode and Code a transponder on board the intercepted aircraft should be operated (Appendix 2 to ANNEX 2)	x	x	x	x	x	
LO	Recall the interception signals described in Appendix 1 to ANNEX 2.	x	x	x	x	x	
010 06 00 00	**PROCEDURES FOR AIR NAVIGATION SERVICES – AIRCRAFT OPERATIONS**						
010 06 01 00	**Foreword, introduction**						
LO	Translate the term “PANS-OPS“ into plain language	x		x			x
LO	State the general aim of PANS-OPS Flight Procedures (ICAO Doc 8168, Volume 1)	x		x			x
010 06 02 00	**Essential definitions and abbreviations**						
LO	Recall all definitions included in Doc. 8168 Volume I to such an extent that you can choose the correct definition from a series of offered samples	x		x			x
LO	Interpret all abbreviations as shown in Doc 8168, Vol I Chapter 2	x		x			x
010 06 03 00	**Departure procedures**						
010 06 03 01	General criteria						
LO	Explain whether or not the departure procedures described in this Document assume that all engines are operating	x		x			x
LO	Name, in general, the factors which dictate the design of an instrument departure procedure	x		x			x
LO	Decode the abbreviation “ATTCS”	x		x			x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Explain in which situations the criteria for omni-directional departures are applied	x		x			x
LO	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)	x		x			x
010 06 03 02	Standard instrument departures						
LO	Define the terms “straight departure“ and “turning departure“ and understand the difference between them.	x		x			x
LO	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 V1	x		x			x
010 06 03 03	Omnidirectional departures						
LO	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	x		x			x
010 06 03 04	Published information						
LO	State the conditions that must be fulfilled if a departure route is to be labelled an RNAV route	x		x			x
LO	Describe how restrictions for omni-directional departures will be expressed in the appropriate publication	x		x			x
010 06 03 05	Area Navigation (RNAV) Departure Procedures and RNP-based Departures						
LO	Explain the relationship between RNAV/RNP-based departure procedures and those for approaches	x		x			x
010 06 03 06	Use of FMS/RNAV equipment to follow conventional departure procedures						
LO	State the provisions for using FMS / RNAV equipment when flying conventional departure procedures	x		x			x
010 06 04 00	**Approach procedures**						
010 06 04 01	General criteria (except table “Speeds for procedure calculations") of Approach Procedure Design. (Instrument Approach Areas, Accuracy of fixes, intersection fix tolerance factors, other fix tolerance factors, Approach Area Splays, Descent Gradient)						

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Name the five possible segments of an instrument approach procedure	x		x			x
LO	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 Approach“	x		x			x
LO	State the minimum obstacle clearance provided by the minimum sector altitudes (MSA) established for an aerodrome.	x		x			x
LO	Name the special task for pilots caused by the fact that instrument approach procedures are based on tracks	x		x			x
LO	Name the most significant performance factor influencing the conduct of Instrument Approach Procedures	x		x			x
LO	State the basic information (or conditions) for establishing the five categories of typical aircraft in connection with the description of instrument approach procedures	x		x			x
LO	State the aim for using five well defined categories of typical aircraft when describing instrument approach procedures	x		x			x
LO	List the five categories of aircraft used in connection with instrument approach procedures	x		x			x
LO	Explain OCA / H for a precision approach procedure, a non-precision approach procedure and a visual (circling) procedure	x		x			x
LO	Describe, in general terms, how operational minima for landing are developed	x		x			x
LO	Name the operational minima which are finally produced starting from OCA / H in the case of precision approaches or non-precision approaches, respectively	x		x			x
LO	Explain when OCH is referring to THR ELEV and when to AD ELEV (differentiating between precision approach, non-precision approach and visual manoeuvring (circling))	x		x			x
LO	Relate the highest approach obstacle, the highest missed approach obstacle and the highest obstacle in the circling area to precision approach, non-precision approach and visual manoeuvring	x		x			x
LO	Translate the following abbreviations used with the calculation of decision altitude, decision height, minimum descent altitude and minimum descent height into plain language:	x		x			x

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Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
	DA, DH, OCA, OCH, MDA, MDH, MOC, DA/H, OCA/H, MDA/H.						
LO	State the minimum obstacle clearance (fixed margin for all aircraft) with and without a final approach fix for a non-precision approach	x		x			x
010 06 04 02	Approach Procedure Design						
LO	Describe how the vertical cross-section for each of the five approach segments is broken down into the various areas	x		x			x
LO	State within which area of the cross-section the Minimum Obstacle Clearance (MOC) is provided for the whole width of the area	x		x			x
LO	Define the terms IAF, IF, FAF, MAPt and TP	x		x			x
LO	Name the area within which the plotted point of an intersection fix may lie	x		x			x
LO	Explain by which factors the dimensions of an intersection fix are determined	x		x			x
LO	State the accuracy of facilities providing track (VOR, ILS, NDB)	x		x			x
LO	Describe the “other fix tolerance factors“: Surveillance Radar (Terminal Area Radar / TAR, En-route surveillance radar / RSR), DME, 75 MHz Marker Beacon, Fixes overhead a station (VOR, NDB)	x		x			x
LO	Describe the basic information relating to approach area splays	x		x			x
LO	State the optimum descent gradient (preferred for a precision approach) in degrees and percent	x		x			x
010 06 04 03	Arrival and approach segments						
LO	Name the five standard segments of an instrument APP procedure and state the beginning and end for each of them	x		x			x
LO	Describe where an ARR route normally ends	x		x			x
LO	State whether or not omni-directional or sector arrivals can be provided	x		x			x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Explain the main task for the initial APP segment	x		x			x
LO	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	x		x			x
LO	Describe the main task of the intermediate APP segment	x		x			x
LO	State the main task of the final APP segment	x		x			x
LO	Name the two possible aims of a final APP	x		x			x
LO	Explain the term “final approach point“ in case of an ILS approach	x		x			x
LO	State what happens if an ILS GP becomes inoperative during the APP	x		x			x
010 06 04 04	Missed Approach						
LO	Name the three phases of a missed approach procedure and describe their geometric limits	x		x			x
LO	Describe the main task of a missed approach procedure	x		x			x
LO	State at which height / altitude the missed approach is assured to be initiated	x		x			x
LO	Define the term “missed approach point (MAPt)“	x		x			x
LO	Describe how an MAPt may be established in an approach procedure	x		x			x
LO	State the pilot‘s reaction if, upon reaching the MAPt, the required visual reference is not established	x		x			x
LO	Describe what a pilot is expected to do in the event a missed approach is initiated prior to arriving at the MAPt	x		x			x
LO	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	x		x			x
010 06 04 05	Visual manoeuvring (circling) in the vicinity of the aerodrome:						

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Describe what is meant by “visual manoeuvring (circling)“	x		x			x
LO	Describe how a visual manoeuvring (circling) area can be constructed	x		x			x
LO	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	x		x			x
LO	State for which types of aircraft the obstacle clearance altitude/height within an established visual manoeuvring (circling) area is determined	x		x			x
LO	Describe how an MDA/H is specified for visual manoeuvring (circling) if the OCA /H is known	x		x			x
LO	State the conditions to be fulfilled before descending below MDA / H in a visual manoeuvring (circling) approach	x		x			x
LO	Describe why there can be no single procedure designed that will cater for conducting a circling approach in every situation	x		x			x
LO	State how the pilot is expected to behave after initial visual contact during a visual manoeuvring (circling)	x		x			x
LO	Describe what the pilot is expected to do if visual reference is lost while circling to land from an instrument approach	x		x			x
010 06 04 06	Area navigation (RNAV) approach procedures based on VOR/DME						
LO	Describe the provisions that must be fulfilled before carrying out VOR / DME RNAV approaches	x		x			x
LO	Explain the disadvantages of the VOR / DME RNAV system	x		x			x
LO	List the factors on which the navigational accuracy of the VOR / DME RNAV system depends	x		x			x
LO	State whether the VOR / DME / RNAV approach is a precision or a non-precision procedure	x		x			x
010 06 04 07	Use of FMS / RNAV equipment to follow conventional non-precision approach procedures						
LO	State the provisions for flying the conventional non-precision approach procedures using FMS / RNAV	x		x			x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
	equipment						
010 06 05 00	**Holding procedures**						
010 06 05 01	In flight procedures, entry, holding						
LO	Explain why deviations from the in-flight procedures of a holding established in accordance with Doc. 8168 are dangerous	x		x			x
LO	Describe how the right turns holdings (as described in Doc. 8168) can be transferred to left turn holding patterns	x		x			x
LO	Describe the shape and terminology associated with the holding pattern	x		x			x
LO	State the bank angle and rate of turn to be used whilst flying in a holding pattern	x		x			x
LO	Explain why pilots in a holding pattern should attempt to maintain tracks and how this can be achieved	x		x			x
LO	Describe where outbound timing begins in a holding pattern	x		x			x
LO	State where the outbound leg in a holding terminates if the outbound leg is based on DME	x		x			x
LO	Describe the three heading entry sectors for entries into a holding pattern	x		x			x
LO	Define the terms “parallel entry“, “offset entry“ and “direct entry“	x		x			x
LO	State the still air time for flying the outbound entry heading with or without DME	x		x			x
LO	Describe what the pilot is expected to do when clearance is received specifying the time of departure from the holding point	x		x			x
010 06 05 02	Obstacle clearance (except table)						
LO	Describe the layout of the basic holding area, entry area and buffer area of a holding pattern	x		x			x
LO	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	x		x			x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
010 06 06 00	**Altimeter setting procedures**						
010 06 06 01	Basic requirements and procedures						
LO	Describe the two main objectives for altimeter settings	x	x	x	x	x	x
LO	Define the terms „QNH“ and „QFE“	x	x	x	x	x	x
LO	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 1013.2 hPa and vice versa	x	x	x	x	x	x
LO	Define the term “flight level” (FL)	x	x	x	x	x	x
LO	State where flight level zero shall be located	x	x	x	x	x	x
LO	State the pressure interval by which consecutive flight levels shall be separated	x	x	x	x	x	x
LO	Describe how flight levels shall be numbered	x	x	x	x	x	x
LO	Define the term “transition altitude“	x	x	x	x	x	x
LO	State how transition altitudes shall normally be specified	x	x	x	x	x	x
LO	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 AD) shall be expressed in practice	x	x	x	x	x	x
LO	State where transition altitudes shall be published	x	x	x	x	x	x
LO	Define the term “transition level“	x	x	x	x	x	x
LO	State when the transition level is normally passed to aircraft	x	x	x	x	x	x
LO	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	x	x	x	x	x	x
LO	Define the term “transition layer“	x	x	x	x	x	x
LO	Describe when the vertical position of an aircraft passing through the transition layer shall be expressed in	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
	terms of flight levels and when in terms of altitude						
LO	State when the QNH altimeter setting shall be made available to departing aircraft	x	x	x	x	x	x
LO	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	x	x	x	x	x	x
LO	Explain when, in air-ground communications during an en-route flight the vertical position of an aircraft shall be expressed in terms of altitude and when in terms of flight levels	x	x	x	x	x	x
LO	Describe why QNH altimeter setting reports should be provided from sufficient locations	x	x	x	x	x	x
LO	State how a QNH altimeter setting shall be made available to aircraft approaching a controlled AD for landing	x	x	x	x	x	x
LO	State under which circumstances the vertical positioning of an aircraft above the transition level may be by reference to altitudes (QNH)	x	x	x	x	x	x
010 06 06 02	Procedures Applicable to Operators and Pilots						
LO	Name the three different “qualities“ the altitudes or flight levels selected for a flight should have	x	x	x	x	x	x
LO	Describe a pre-flight operational test in case of QNH setting and in case of QFE setting including indication (error) tolerances referred to the different test ranges	x	x	x	x	x	x
LO	State on which setting at least one altimeter shall be set prior to taking off	x	x	x	x	x	x
LO	State where during climb the altimeter setting shall be changed from QNH to 1013.2 hPa	x	x	x	x	x	x
LO	Describe when a pilot of an aircraft intending to land at an AD shall obtain the transition level	x	x	x	x	x	x
LO	Describe when a pilot of an aircraft intending to land at an AD shall obtain the actual QNH altimeter setting	x	x	x	x	x	x
LO	State where the altimeter settings shall be changed from 1013.2 hPa to QNH during descent for landing	x	x	x	x	x	x
010 06 07 00	Simultaneous Operation on parallel or near-parallel RWY						
LO	Describe the two basic modes of operation applicable to simultaneous parallel instrument approaches	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Describe the following different operations: - Simultaneous instrument departures - Segregated parallel approaches / departures - Semi-mixed and mixed operations	x	x	x	x	x	x
LO	State what “NOZ“ and “NTZ“ mean.	x	x	x	x	x	x
LO	Name the airborne requirements (equipment) for conducting parallel approaches	x	x	x	x	x	x
LO	State which kind of approaches (Straight-in, Circling etc.) parallel approaches have to be conducted	x	x	x	x	x	x
LO	State whether or not radar monitoring is required for simultaneous independent parallel approaches and how weather conditions effect this.	x	x	x	x	x	x
LO	State the maximum angle of interception for an ILS localizer CRS or MLS final APP Track in case of simultaneous independent parallel approaches	x	x	x	x	x	x
LO	State conditions that must be met before vertical separation between two aircraft flying simultaneous independent approaches can be reduced below 300 m / 1000 feet	x	x	x	x	x	x
LO	Describe the special conditions for tracks on missed approach procedures and departures in case of simultaneous parallel operations	x	x	x	x	x	x
010 06 08 00	**Secondary surveillance radar transponder operating procedures**						
010 06 08 01	Operation of transponders						
LO	State when and where the pilot shall operate the transponder provided the aircraft carries a serviceable transponder	x	x	x	x	x	x
LO	State the mode and code that the pilot shall operate the transponder on in the absence of any ATC directions or regional air navigation agreements (except in cases of emergency, COM failure or unlawful interference)	x	x	x	x	x	x
LO	Indicate in what circumstances the pilot shall operate Mode C, provided the Transponder of the aircraft is equipped with Mode C	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	State whether or not the pilot shall “SQUAWK IDENT“ at his own discretion	x	x	x	x	x	x
LO	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	x	x	x	x	x	x
LO	State the mode and code that a pilot shall set on the transponder of his aircraft to indicate: - a state of emergency - a COM failure - that the aircraft is subject to unlawful interference in flight	x	x	x	x	x	x
LO	Describe the consequences of a transponder failure in flight	x	x	x	x	x	x
LO	State the primary action of the pilot in the case of an unserviceable transponder before departure when no repair or replacement at this aerodrome is possible	x	x	x	x	x	x
010 06 08 02	Operation of ACAS equipment						
LO	Describe the main reason for using ACAS	x	x	x	x	x	x
LO	Indicate whether the “use of ACAS indications” described in Doc 8168 is absolutely mandatory	x	x	x	x	x	x
LO	Explain the pilots reaction required to allow ACAS to fulfil its role of assisting pilots in the avoidance of potential collisions	x	x	x	x	x	x
LO	Explain why pilots shall not manoeuvre their aircraft in response to TA’s only	x	x	x	x	x	x
LO	Explain the significance of TA in view of a possible RA	x	x	x	x	x	x
LO	State why a pilot should follow an RA immediately	x	x	x	x	x	x
LO	List the reasons which may force a pilot to disregard an RA	x	x	x	x	x	x
LO	Decide how a pilot shall react if there is a conflict between RA’s in case of an ACAS/ACAS co-ordinated encounter	x	x	x	x	x	x
LO	Explain the importance of instructing ATC immediately that an RA has been followed	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Explain the duties of a pilot as far as ATC is concerned when an RA situation is resolved	x	x	x	x	x	x
010 07 00 00	**AIR TRAFFIC SERVICES AND AIR TRAFFIC MANAGEMENT**						
010 07 01 00	**Annex 11 - Air Traffic Services**						
010 07 01 01	Definitions						
LO	Recall the definitions given in ANNEX 11 except the following: accepting unit, accuracy, air-taxiing, conference communications, cyclic redundancy check (CRC), data quality, geodetic datum, integrity (aeronautical data), printed communications, station declination	x	x	x	x	x	x
LO	Explain the meaning of the terms “strayed aircraft” and “unidentified aircraft”	x	x	x	x	x	x
010 07 01 02	General						
LO	Name the objectives of Air Traffic Services (ATS)	x	x	x	x	x	x
LO	Describe the three basic types of Air Traffic Services	x	x	x	x	x	x
LO	Describe the three basic types of Air Traffic Control services (ATC)	x	x	x	x	x	x
010 07 01 03	Airspace						
LO	Distinguish between the various classes of airspace (A to G)	x	x	x	x	x	x
LO	Understand the various rules and services that apply in the various classes of airspace (A to G)	x	x	x	x	x	x
LO	Explain which airspace shall be included in an FIR	x	x	x	x	x	x
LO	State the designation for those portions of the airspace where flight information service (FIS) and alerting service will be provided	x	x	x	x	x	x
LO	State the designations for those portions of the airspace where ATC service will be provided	x	x	x	x	x	x
LO	Indicate whether or not CTAs and CTRs designated within a FIR shall form part of that FIR	x	x	x	x	x	x
LO	State the reason for the establishment of ATC units	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Name the lower limit of a CTA as far as ICAO standards are concerned	x	x	x	x	x	x
LO	State whether or not the lower limit of a CTA has to be established uniformly	x	x	x	x	x	x
LO	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	x	x	x	x	x	x
LO	Describe in general the lateral limits of CTRs	x	x	x	x	x	x
LO	State the minimum extension (in NM) of the lateral limits of a CTR	x	x	x	x	x	x
LO	State the upper limits of a CTR located within the lateral limits of a CTA	x	x	x	x	x	x
LO	Describe the purpose for establishing FICs	x	x	x	x	x	x
LO	State where MNM Flight Altitudes shall be determined (and promulgated) and who is responsible for this	x	x	x	x	x	x
010 07 01 04	Air Traffic Control Services						
LO	Name the time units used by ATS	x	x	x	x	x	x
LO	Name all classes of airspace in which ATC shall be provided	x	x	x	x	x	x
LO	Name the ATS units providing ATC service (area control service, approach control service, aerodrome control service)	x	x	x	x	x	x
LO	Describe which unit(s) may be assigned with the task to provide specified services on the apron	x	x	x	x	x	x
LO	Name the purpose of clearances issued by an ATC unit	x	x	x	x	x	x
LO	Describe the aim of clearances issued by ATC with regard to IFR, VFR or special VFR flights and refer to the different airspaces	x	x	x	x	x	x
LO	List the various (five possible) parts of an ATC clearance	x	x	x	x	x	x
LO	Describe the various aspects of clearance co-ordination	x	x	x	x	x	x
LO	State how ATC shall react when it becomes apparent that traffic, additional to that one already accepted, can not be accommodated within a given period of time at a particular location or in a particular area, or	x	x	x	x	x	x

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Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
	can only be accommodated at a given rate						
LO	Explain why the movement of persons, vehicles and towed aircraft on the manoeuvring area of an AD shall be controlled by the AD TWR (as necessary)	x	x	x	x	x	x
010 07 01 05	Flight Information Service (FIS)						
LO	State for which aircraft FIS shall be provided	x	x	x	x	x	x
LO	State whether or not FIS shall include the provision of pertinent SIGMET and AIRMET information	x	x	x	x	x	x
LO	State which information FIS shall include in addition to SIGMET and AIRMET information	x	x	x	x	x	x
LO	Indicate which other information the FIS shall include in addition to the special information given in ANNEX 11	x	x	x	x	x	x
LO	Name the three major types of operational FIS broadcasts	x	x	x	x	x	x
LO	Give the meaning of the acronym ATIS in plain language	x	x	x	x	x	x
LO	Show that you are acquainted with the basic conditions for transmitting an ATIS as indicated in ANNEX 11	x	x	x	x	x	x
LO	Mention the four possible messages	x	x	x	x	x	x
LO	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)	x	x	x	x	x	x
010 07 01 06	Alerting Service						
LO	Indicate the aircraft to which alerting service shall be provided	x	x	x	x	x	
LO	Name the unit which shall be notified by the responsible ATS unit immediately an aircraft is considered to be in a state of emergency	x	x	x	x	x	
LO	Name the three stages of emergency and describe the basic conditions for each kind of emergency	x	x	x	x	x	
LO	Show knowledge of the meaning of the expressions INCERFA, ALERFA and DETRESFA	x	x	x	x	x	
LO	Describe the limiting conditions for the information of aircraft in the vicinity of an aircraft being in a	x	x	x	x	x	

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
	state of emergency						
LO	State on which emergency frequency a pilot can expect the ATS to contact him in case of an interception						
010 07 01 07	Principles governing RPN						
LO	State the meaning of the expressions RNP 4, RNP 1 etc.	x	x	x	x	x	
LO	Describe the reason for establishing a system of route designators and required navigation performance (RNP)	x	x	x	x	x	
LO	State whether or not a prescribed RNP type is considered an integral part of the ATS route designator	x	x	x	x	x	
LO	Show general knowledge of the composition of an ATS route designator	x	x	x	x	x	
LO	Show knowledge of all information concerning ATS airspace classification (as described in Appendix 4 to ANNEX 11)	x	x	x	x	x	
010 07 02 00	**Document 4444 - Air Traffic Management**						
010 07 02 01	Foreword (Scope and purpose)						
LO	Explain in plain language the meaning of the abbreviation “PANS-ATM”	x	x	x	x	x	x
LO	State whether or not the procedures prescribed in Doc 4444 are directed exclusively to ATS services personnel	x	x	x	x	x	x
LO	Describe the relationship between Doc 4444 and other documents	x	x	x	x	x	x
LO	State whether or not a clearance issued by ATC units does include prevention of collision with terrain and if there is an exception to this, name the exception	x	x	x	x	x	x
010 07 02 02	Definitions						
LO	Explain in plain language, the meaning of the abbreviation “PANS-RAC“.	x	x	x	x	x	x
LO	Recall all definitions given in Doc 4444 except the following:	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
	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						
010 07 02 03	ATS System Capacity and Air Traffic Flow Management						
LO	Explain when and where an air traffic flow management (ATFM) service shall be implemented	x	x	x	x	x	x
010 07 02 04	General Provisions for Air Traffic services						
LO	Name the three basic types of Air Traffic Control service	x	x	x	x	x	x
LO	Describe who is responsible for the provision of flight information and alerting service within a flight information region (FIR) within controlled airspace and at controlled aerodromes	x	x	x	x	x	x
010 07 02 05	ATC Clearances						
LO	Explain “the sole scope and purpose” of an ATC clearance	x	x	x	x	x	x
LO	State on which information the issue of an ATC clearance is based	x	x	x	x	x	x
LO	Describe what a PIC should do if an ATC clearance is not suitable	x	x	x	x	x	x
LO	Indicate who bears the responsibility for maintaining applicable rules and regulations whilst flying under the control of an ATC unit	x	x	x	x	x	x
LO	Name the two primary purposes of clearances issued by ATC units	x	x	x	x	x	x
LO	State why clearances must be issued “early enough” to en-route aircraft	x	x	x	x	x	x
LO	Explain what is meant by the expression “clearance limit”	x	x	x	x	x	x
LO	Explain the meaning of the phrases ”cleared via flight plan route”, “cleared via (designation) departure” and “cleared via (designation) arrival “ in an ATC clearance.	x	x	x	x	x	x
LO	List which items of an ATC clearance shall always be read back by the flight crew	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
010 07 02 06	Speed Control						
LO	Explain the reason for speed control by ATC	x	x	x	x	x	x
LO	Define the maximum speed changes that ATC may impose	x	x	x	x	x	x
LO	State within which distance from the threshold the PIC must not expect any kind of speed control	x	x	x	x	x	x
010 07 02 06	Change of Flight Rules Status						
LO	Explain how the change from IFR to VFR can be initiated by the PIC	x		x			x
LO	Indicate the expected reaction of the appropriate ATC unit upon a request to change from IFR to VFR	x		x			x
010 07 02 07	Wake turbulence						
LO	State the categories of aircraft types on which wake turbulence separation minima are based	x	x	x	x	x	x
LO	State the categories of wake turbulence and their respective limits	x	x	x	x	x	x
LO	Describe the special requirements for an aircraft with the category “Heavy” when the initial radiotelephony contact between such aircraft and ATC is made	x	x	x	x	x	x
LO	Explain the various separation minima required solely on the basis of wake turbulence	x	x	x	x	x	x
010 07 02 08	Altimeter Setting Procedures						
LO	Define the expression transition level, transition layer and transition altitude (see definitions)	x	x	x	x	x	x
LO	Indicate how the vertical position of an aircraft in the vicinity of an aerodrome shall be expressed at or below the transition altitude, at or above the transition level and while climbing or descending through the transition layer	x	x	x	x	x	x
LO	Describe when the height of an aircraft using QFE during an NDB approach is referred to the landing threshold instead of the aerodrome elevation	x	x	x	x	x	x
LO	Indicate how far altimeter settings provided to aircraft shall be rounded up or down	x	x	x	x	x	x
LO	Define the expression “lowest usable flight level”	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Determine how the vertical position of an aircraft on a fight en-route is expressed at or above the lowest usable flight level and below the lowest usable flight level	x	x	x	x	x	x
LO	State who establishes the transition level to be used in the vicinity of an aerodrome	x	x	x	x	x	x
LO	Decide how and when a flight crew shall be informed about the transition level	x	x	x	x	x	x
LO	State whether or not the pilot can request the transition level to be included in the approach clearance	x	x	x	x	x	x
LO	State in what kind of clearance the QNH altimeter setting shall be included	x	x	x	x	x	x
010 07 02 09	Position Reporting						
LO	Describe when position reports shall be made by an aircraft flying on routes defined by designated significant points	x	x	x	x	x	x
LO	List the six items that are normally included in a voice report	x	x	x	x	x	x
LO	Name the requirements for using a simplified position report with Flight level, next position (and time over) and ensuing significant points omitted	x	x	x	x	x	x
LO	Name the item of a position report which must be forwarded to ATC with the initial call after changing to a new frequency	x	x	x	x	x	x
LO	Indicate the item of a position report which may be omitted if SSR Mode C is used	x	x	x	x	x	x
LO	Explain in which circumstances the indicated speed will be included in a position report	x	x	x	x	x	x
LO	Explain the meaning of the abbreviation “ADS”	x	x	x	x	x	x
LO	State to which unit an ADS report shall be made	x	x	x	x	x	x
LO	Describe how ADS reports shall be made	x	x	x	x	x	x
LO	Describe which expression shall precede the level figures in a position report if the level is reported in relation to 1013.2 hPa (standard pressure)	x	x	x	x	x	x
010 07 02 10	Reporting of Operational and Meteorological Information						

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	List the occasions when special air reports shall be made	x	x	x	x	x	x
010 07 02 11	Separation methods and minima						
LO	Explain the general provisions for the separation of controlled traffic	x		x			x
LO	Name the two basic kinds of separation used in aviation	x		x			x
LO	Understand the difference between the type of separation provided within the various classes of airspace and between the various types of flight	x		x			x
LO	State who is responsible for the avoidance of collision with other aircraft when operating in VMC	x		x			x
LO	State the ICAO documents in which details of current separation minima are prescribed	x		x			x
LO	Describe how vertical separation is obtained	x		x			x
LO	State the required vertical separation minimum	x		x			x
LO	Describe how the cruising levels of aircraft flying to the same destination at the expected approach sequence are correlated between each other	x		x			x
LO	Name the conditions that must be adhered to, when two aircraft are cleared to maintain a specified vertical separation between them during climb or descent	x		x			x
LO	List the two main methods for horizontal separation	x		x			x
LO	Describe how lateral separation of aircraft at the same level may be obtained	x		x			x
LO	Explain the term “Geographical Separation“	x		x			x
LO	Describe track separation between aircraft using the same navigation aid or method	x		x			x
LO	Describe the three basic means for the establishment of longitudinal separation	x		x			x
LO	Describe the circumstances under which a reduction in separation minima may be allowed	x		x			x
LO	Explain the reduction in separation permitted	x		x			x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Indicate the standard horizontal radar separation in NM	x		x			x
LO	State the wake turbulence radar separation for aircraft in the APP and DEP phases of a flight when an aircraft is operating directly behind another aircraft at the same ALT or less than 300 m (1000 ft) below	x		x			x
010 07 02 10	Separation in the vicinity of aerodromes						
LO	Define the expression “Essential Local Traffic”	x	x	x	x	x	x
LO	State which possible decision the PIC may choose if departing aircraft are expedited by suggesting a take-off direction which is not “into the wind”.	x	x	x	x	x	x
LO	State the condition to enable ATC to initiate a visual approach for an IFR flight	x	x	x	x	x	x
LO	Indicate whether or not separation will be provided by ATC between an aircraft executing a visual approach and other arriving or departing aircraft	x	x	x	x	x	x
LO	State in which case when an aircraft is performing a standard instrument approach procedure, only the final approach track has to be forwarded to flight crew.	x	x	x	x	x	x
LO	Describe which flight level should be assigned to an aircraft first arriving over a holding fix for landing	x	x	x	x	x	x
LO	Talk about the priority that will be given to aircraft for a landing	x	x	x	x	x	x
LO	Understand the situation when a pilot of an aircraft in an approach sequence indicates his intention to hold for weather improvements	x	x	x	x	x	x
LO	Explain the term “Expected Approach Time” and the procedures for its use.	x	x	x	x	x	x
LO	State the reasons which could eventually lead to the decision to use another take-off or landing direction than the one into the wind	x	x	x	x	x	x
LO	Name the possible consequences for a PIC if the “RWY-in-use“ is not considered suitable for the operation involved	x	x	x	x	x	x
010 07 02 11	Departing aircraft						

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	State the number of minutes of an expected departure delay, about which an aircraft operator should be informed by ATC	x	x	x	x	x	x
LO	Explain which very important factor influences the approach sequence, especially the longitudinal separation of the approaching aircraft	x	x	x	x	x	x
LO	Make yourself acquainted with all information regarding departing aircraft on near or near-parallel runways, including knowledge about NTZ and OTZ and the various combinations of parallel departures.	x	x	x	x	x	x
010 07 02 12	Arriving aircraft						
LO	State the sequence of priority between aircraft landing (or in the final stage of an approach to land) and aircraft intending to depart	x	x	x	x	x	x
LO	State in which case during an instrument approach procedure only the final approach track need to be forwarded to the flight crew.	x	x	x	x	x	x
LO	Explain which very important factor influences the approach sequence, especially the longitudinal separation of the approaching aircraft	x	x	x	x	x	x
LO	Make yourself acquainted with all information regarding arriving aircraft on near or near-parallel runways, including knowledge about NTZ and OTZ and the various combinations of parallel arrivals.	x	x	x	x	x	x
010 07 02 13	Procedures for Aerodrome Control Service						
LO	Describe the general task of a TWR with regard to issuing information and CLR to aircraft under its control	x	x	x	x	x	x
LO	List for which aircraft and their given positions or flight situations TWRs shall prevent collisions	x	x	x	x	x	x
LO	Name the AD equipment the operational failure or irregularity of which shall be immediately reported by the TWR	x	x	x	x	x	x
LO	State that, in case that an aircraft does not land within a certain period of time, the TWR shall report to the ACC or FIC.	x	x	x	x	x	x
LO	State the duration of that period of time	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Describe the procedures to be observed by the TWR whenever VFR operations are suspended	x	x	x	x	x	x
LO	Explain the term “RWY-in-use“	x	x	x	x	x	x
LO	Explain the selection of RWY in use	x	x	x	x	x	x
LO	List the information a TWR should give to an aircraft: - Prior to taxi for take-off - Prior to take-off - Prior to entering the traffic circuit	x	x	x	x	x	x
LO	Explain when and why a report of surface wind direction given to a pilot is true or magnetic	x	x	x	x	x	x
LO	Explain the **exact** meaning of the expression “Runway vacated”	x	x	x	x	x	x
010 07 02 14	Radar services						
LO	State to what extent the use of radar in air traffic services may be limited	x	x	x	x	x	x
LO	State what radar derived information shall be available for display to the controller as a minimum	x	x	x	x	x	x
LO	Define the term “SSR“	x	x	x	x	x	x
LO	State the SSR Codes reserved for emergency, COM failure or unlawful interference	x	x	x	x	x	x
LO	Describe the operation of a transponder (Mode and Code) in case of distress, emergency or unlawful interference	x	x	x	x	x	x
LO	Name the two basic identification procedures used with radar	x	x	x	x	x	x
LO	Define the term “PSR“	x	x	x	x	x	x
LO	Describe the circumstances under which an aircraft provided with radar service should be informed of its position	x	x	x	x	x	x
LO	List the possible forms of position information passed to the aircraft by radar services	x	x	x	x	x	x
LO	Define the term “radar vectoring“	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	State the aims of radar vectoring as shown in ICAO Doc 4444	x	x	x	x	x	x
LO	State how radar vectoring shall be achieved	x	x	x	x	x	x
LO	Describe the information which shall be given to an aircraft when radar vectoring is terminated and the pilot is instructed to resume own navigation	x	x	x	x	x	x
LO	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	x	x	x	x	x	x
010 07 02 15	Air Traffic Advisory Service						
LO	Define the term “Air Traffic Advisory Service“	x	x	x	x	x	x
LO	Describe the objective of the air traffic advisory service	x	x	x	x	x	x
LO	State to which aircraft air traffic advisory service will be provided	x	x	x	x	x	x
LO	Explain why air traffic advisory service does not deliver “Clearances“ but only “Advisory Information“	x	x	x	x	x	x
LO	Describe the various aspects of the “Alerting Service	x	x	x	x	x	x
010 07 02 16	Procedures related to emergencies, communication failure and contingencies						
LO	State the Mode and Code of SSR equipment a pilot might operate in a (general) state of emergency or (specifically) in case the aircraft is subject to unlawful interference	x	x	x	x	x	x
LO	State the special rights an aircraft in a state of emergency can expect from ATC	x	x	x	x	x	x
LO	Describe the expected action of aircraft after receiving a broadcast from ATS concerning the emergency descent of an aircraft	x	x	x	x	x	x
LO	State how it can be ascertained, in case of a failure of two-way communication, whether the aircraft is able to receive transmissions from the ATS unit	x	x	x	x	x	x
LO	Explain the assumption based on which separation shall be maintained if an aircraft is known to experience a COM failure in VMC or in IMC	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	State on which frequencies appropriate information, for an aircraft encountering two way COM failure, will be sent by ATS	x	x	x	x	x	x
LO	Describe the expected activities of an ATS-unit after having learned that an aircraft is being intercepted in or outside its area of responsibility	x	x	x	x	x	x
LO	State what is meant by the expression “Strayed aircraft” and “Unidentified aircraft”	x	x	x	x	x	x
LO	Explain the minimum level for fuel dumping and the reasons for this	x	x	x	x	x	x
LO	Explain the possible request of ATC to an aircraft to change its RTF callsign	x	x	x	x	x	x
010 07 02 17	Miscellaneous procedures						
LO	Explain the meaning of “AIRPROX”	x	x	x	x	x	x
LO	Determine the task of an Air Traffic Incident report	x	x	x	x	x	x
010 08 00 00	**AERONAUTICAL INFORMATION SERVICE**						
010 08 01 00	Introduction and						
LO	State, in general terms, the object of the aeronautical information service	x	x	x	x	x	x
LO	Name the three most important implementations in air navigation which have significantly changed the role and importance of aeronautical information/data within recent years	x	x	x	x	x	x
010 08 02 00	Essential definitions in Annex 15						
LO	Recall the following definitions: Aeronautical information circular (AIC), aeronautical information publication (AIP), AIP amendment, AIP supplement, AIRAC, danger area, integrated aeronautical information package, international airport, international NOTAM office (NOF), manoeuvring area, movement area, NOTAM, pre-flight information bulletin (PIB), prohibited area, restricted area, SNOWTAM, ASHTAM	x	x	x	x	x	x
010 08 03 00	General						
LO	State during which period of time an aeronautical information service shall be available with reference to	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
	an aircraft flying in the area of responsibility of an AIS, provided a 24-hours service is not available						
LO	Name (in general) the kind of aeronautical information / data which an AIS service shall make available in a suitable form for flight crews	x	x	x	x	x	x
LO	Summarize the duties of an aeronautical information service concerning aeronautical information data for the territory of the State	x	x	x	x	x	x
LO	Understand the principles of WGS 84	x	x	x	x	x	x
010 08 04 00	Aeronautical Information Package						
LO	Name the three most important implementations in air navigation which have significantly changed the role and importance of aeronautical information/data within recent years	x	x	x	x	x	x
LO	Name the different elements that make up an Aeronautical Information Package	x	x	x	x	x	x
010 08 04 01	Aeronautical Information Publications (AIP)						
LO	State the primary purpose of the AIP	x	x	x	x	x	x
LO	Name the different parts of the AIP	x	x	x	x	x	x
LO	Name where in the AIP the pilot can find a List of significant differences between the national regulations and practices of the State and the related ICAO Standards, Recommended	x	x	x	x	x	x
LO	State in which main part of the AIP the following information can be found: - Differences from ICAO Standards, Recommended Practices and Procedures - Location indicators, aeronautical information services, minimum flight altitude, VOLMET service, SIGMET service - General rules and procedures (especially general rules, VFR, IFR, ALT setting procedure, interception of civil aircraft, unlawful interference, air traffic incidents), - ATS airspace (especially FIR, UIR, TMA), - ATS routes (especially lower ATS routes, upper ATS routes, area navigation routes, - Aerodrome data including Aprons, TWYs and check locations/positions data	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
	- Navigation warnings (especially prohibited, restricted and danger areas) - aircraft instruments, equipment and flight documents - AD surface movement guidance and control system and markings, - RWY physical characteristics, declared distances, APP and RWY lighting, - AD radio navigation and landing aids, - charts related to an AD - entry, transit and departure of aircraft, passengers, crew and cargo						
LO	State how permanent changes to the AIP shall be published	x	x	x	x	x	x
LO	Explain what kind of information shall be published in form of AIP Supplements	x	x	x	x	x	x
LO	Describe how conspicuousness of AIP Supplement pages is achieved	x	x	x	x	x	x
010 08 04 02	NOTAMs						
LO	Describe how information shall be published which in principal would belong to NOTAMs but includes extensive text and/or graphics	x	x	x	x	x	x
LO	Summarize essential information which lead to the issuance of a NOTAM	x	x	x	x	x	x
LO	Summarize information which should not be notified by NOTAMs	x	x	x	x	x	x
LO	State to whom NOTAMs shall be distributed	x	x	x	x	x	x
LO	Explain how information regarding snow, ice and standing water on AD pavements shall be reported	x	x	x	x	x	x
LO	Describe the means by which NOTAMs shall be distributed	x	x	x	x	x	x
LO	State which information an ASHTAM may contain	x	x	x	x	x	x
010 08 04 03	Aeronautical Information Regulation and Control (AIRAC)						
LO	List circumstances to which information are concerned which shall or should be distributed as AIRAC	x	x	x	x	x	x
LO	State the sequence in which AIRACs shall be issued and state how many days in advance of the effective	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
	date the information shall be distributed by AIS						
010 08 04 04	Aeronautical Information Circulars (AIC)						
LO	Describe the reasons for the publication of AICs	x	x	x	x	x	x
LO	Explain the organisation and standard colour codes for AICs	x	x	x	x	x	x
LO	Explain the normal publication cycle for AICs	x	x	x	x	x	x
010 08 04 05	Pre-flight and Post-flight Information/Data						
LO	List (in general) which details shall be included in aeronautical information provided for pre-flight planning purposes at the appropriate ADs	x	x	x	x	x	x
LO	Summarize the additional current information relating to the AD of departure that shall be provided as pre-flight information	x	x	x	x	x	x
LO	Describe how a recapitulation of current NOTAM and other information of urgent character shall be made available to flight crews	x	x	x	x	x	x
LO	State which post-flight information from aircrews shall be submitted to AIS for distribution as required by the circumstances	x	x	x	x	x	x
010 09 00 00	**AERODROMES/HELIPORTS**						
010 09 01 00	General						
LO	Recognise all definitions in ANNEX 14 except the following: Accuracy, aircraft classification number, cyclic redundancy check, data quality, effective intensity, ellipsoid height (geodetic height), geodetic datum, geoid, geoid ondulation, integrity (aeronautical data), light failure, lighting system reliability, orthometric height, station declination, usability factor, Reference Code	x	x	x	x	x	x
LO	Describe, in general terms, the intent of the AD reference code as well as its composition of two elements	x	x	x	x	x	x
010 09 02 00	Aerodrome data						

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
010 09 02 01	Aerodrome Reference Point						
LO	Describe where the aerodrome reference point shall be located and where it shall normally remain	x	x	x	x	x	x
010 09 02 02	Pavement Strengths						
LO	Explain the terms PCN and ACN and describe their mutual dependence	x	x	x	x	x	x
LO	Describe how the bearing strength for an aircraft with an apron mass equal to or less than 5700 kg shall be reported.	x	x	x	x	x	x
010 09 02 03	Declared Distances						
LO	List the four most important declared RWY distances and indicate where you can find guidance on their calculation in Annex 14	x	x	x	x	x	x
LO	Recall the definitions for the four main Declared Distances	x	x	x	x	x	x
010 09 02 04	Condition of the Movement Area and related facilities						
LO	Understand the purpose of informing AIS and ATS units about the condition of the movement area and relating facilities	x	x	x	x	x	x
LO	List the matters of operational significance or affecting aircraft performance which should be reported to AIS and ATS units for the transmission to aircraft involved	x	x	x	x	x	x
LO	Describe the four different types of water deposit on runways	x	x	x	x	x	x
LO	Name the three defined states of frozen water on the RWY	x	x	x	x	x	x
010 09 03 00	Physical Characteristics						
010 09 03 01	Runways						
LO	Describe where a threshold should normally be located	x	x	x	x	x	x
LO	Acquaint yourself with the general considerations concerning runways associated with a Stopway or Clearway	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	State where in Annex 14 you can find detailed information about the required runway width dependent upon Code number and Code letter	x	x	x	x	x	x
010 09 03 02	Runway Strips						
LO	Define the term “Runway strip“	x	x	x	x	x	x
LO	State the length, width and grading of RWY strips	x	x	x	x	x	x
010 09 03 03	Runway end safety area						
LO	Define the term “RWY end safety area“	x	x	x	x	x	x
LO	State the length and width of a RWY end safety area	x	x	x	x	x	x
010 09 03 04	Clearways						
LO	Define the term “Clearway“	x	x	x	x	x	x
LO	State the origin, length and width of a clearway	x	x	x	x	x	x
010 09 03 05	Stopways						
LO	Define the term “Stopway“	x	x	x	x	x	x
LO	State the width of a „Stopway“	x	x	x	x	x	x
010 09 03 06	Radio-altimeter operating area						
LO	Describe where a radio-altimeter operating area should be established and how far it should extend laterally and longitudinally	x	x	x	x	x	x
010 09 03 07	Taxiways						
LO	Describe the condition which must be fulfilled to maintain the required clearance between the outer main wheels of an aircraft and the edge of the taxiway.	x	x	x	x	x	x
LO	Explain the term “wheel base” and “Wheel-to-edge” clearance	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Explain the importance of keeping the cockpit over the taxiway centreline markings in taxiway curves	x	x	x	x	x	x
LO	Describe the reasons and the requirements for rapid exit taxiways	x	x	x	x	x	x
LO	State the reason for a taxiway widening in curves	x	x	x	x	x	x
LO	Explain when and where holding bays should be provided	x	x	x	x	x	x
LO	Describe where runway-holding positions shall be established	x	x	x	x	x	x
LO	Define the term “road-holding position“	x	x	x	x	x	x
LO	Describe where Intermediate taxi-way holding positions should be established.	x	x	x	x	x	x
010 09 04 00	Visual aids for navigation						
010 09 04 01	Indicators and signalling devices						
LO	Describe the wind direction indicators with which ADs shall be equipped	x	x	x	x	x	x
LO	Describe a landing direction indicator	x	x	x	x	x	x
LO	Explain the capabilities of a signalling lamp	x	x	x	x	x	x
LO	State which characteristics a signal area should have	x	x	x	x	x	x
010 09 04 02	Markings						
LO	Name the colours used for the various markings (RWY, TWY, aircraft stands, apron safety lines)	x	x	x	x	x	x
LO	State where a RWY designation marking shall be provided and how it is designed	x	x	x	x	x	x
LO	Describe the application, location and characteristics of: - RWY centre line markings - THR marking - Aiming point marking - Touchdown Zone marking	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
	- RWY side stripe marking - TWY centre line marking - Runway-holding position marking - Intermediate holding position marking - Aircraft stand markings - Apron safety lines - Road holding position marking - Mandatory instruction marking - Information marking						
010 09 04 03	Lights						
LO	Describe mechanical safety considerations regarding elevated approach lights and elevated RWY, stopway and taxiway-lights	x	x	x	x	x	x
LO	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	x	x	x	x	x	x
LO	List the conditions for the installation of an AD beacon and describe its general characteristics	x	x	x	x	x	x
LO	Name the different kinds of operations for which a simple APP lighting system shall be used	x	x	x	x	x	x
LO	Describe the basic installations of a simple APP lighting system including the dimensions and distances normally used	x	x	x	x	x	x
LO	Describe the principle of a precision APP category I lighting system including such information as location and characteristics	x	x	x	x	x	x
LO	Describe the principle of a precision APP category II and III lighting system including such information as location and characteristics, especially mentioning the inner 300 m of the system *Remark – ATPL (A) only*	x					
LO	Describe the wing bars of PAPI and APAPI	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Describe what the pilot will see during approach, using PAPI or APAPI	x	x	x	x	x	x
LO	Explain the application, location and characteristics of: - 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 - Intermediate holding position lights - RWY guard lights - Road holding position lights	x	x	x	x	x	x
010 09 04 04	Signs						
LO	State the general purpose for installing signs	x	x	x	x	x	x
LO	Explain what signs are the only ones on the movement area utilizing red	x	x	x	x	x	x
LO	List the provisions for illuminating signs	x	x	x	x	x	x
LO	State the purpose for installing mandatory instruction signs	x	x	x	x	x	x
LO	Name the kind of signs which “mandatory instruction signs“ shall include	x	x	x	x	x	x
LO	Name the colours used with a mandatory instruction signs	x	x	x	x	x	x
LO	Describe by which sign a pattern “A“ runway-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	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Describe by which sign a pattern “B” runway-holding position (ie at an intersection of a taxiway and a Precision approach RWY) marking shall be supplemented	x	x	x	x	x	x
LO	Describe the location of: - a RWY designation sign at a taxiway / RWY intersection - a NO ENTRY sign - a RWY holding position sign	x	x	x	x	x	x
LO	Name the sign with which it shall be indicated that a taxiing aircraft 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)	x	x	x	x	x	x
LO	Describe the various possible inscriptions on RWY designation signs and on holding position signs	x	x	x	x	x	x
LO	Describe the inscription on an Intermediate-holding position sign “en-route“ on a taxiway (i.e. other than a taxiway / RWY-, RWY / RWY- or taxiway / taxiway-intersection)	x	x	x	x	x	x
LO	State when information signs shall be provided	x	x	x	x	x	x
LO	Describe the colours used in connection with information signs	x	x	x	x	x	x
LO	Describe the possible inscriptions on information signs	x	x	x	x	x	x
LO	Explain the application, location and characteristics of aircraft stand identification signs	x	x	x	x	x	x
LO	Explain the application, location and characteristics of road holding position signs	x	x	x	x	x	x
010 09 04 05	Markers						
LO	Explain why Markers located near a runway or Taxiway shall be limited in their height.						
LO	Explain the application, location and characteristics of: - Unpaved RWY edge markers - TWY edge markers - TWY centre line markers	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
	- unpaved TWY edge markers - boundary markers						
010 09 05 00	Visual aids for denoting obstacles						
010 09 05 01	Marking of objects						
LO	State how fixed or mobile objects shall be marked if colouring is not practicable	x	x	x	x	x	x
LO	Describe marking by colours (fixed or mobile objects)	x	x	x	x	x	x
LO	Explain the use of markers for the marking of objects, overhead wires, cables etc.	x	x	x	x	x	x
LO	Explain the use of flags for the marking of objects	x	x	x	x	x	x
010 09 05 02	Lighting of objects						
LO	Name the different types of lights to indicate the presence of objects which must be lighted	x	x	x	x	x	x
LO	State the time period/s of the 24 hours of a day during which high-intensity lights are intended for use	x	x	x	x	x	x
LO	Describe (in general terms) the location of obstacle lights	x	x	x	x	x	x
LO	Describe (in general and for normal circumstances) colour and sequence of low-intensity obstacle lights, medium-intensity obstacle lights and high-intensity obstacle lights	x	x	x	x	x	x
LO	State where you can find information about lights to be displayed by aircraft	x	x	x	x	x	x
010 09 06 00	Visual aids for denoting restricted use of areas						
LO	Describe (in general) closed markings on RWYs and taxiways or parts thereof (including colours)	x	x	x	x	x	x
LO	State how the pilot of an aircraft moving on the surface of a taxiway, holding bay or apron shall be warned that the shoulders of these surfaces are “non-load-bearing”	x	x	x	x	x	x
LO	Describe the pre-threshold marking (including colours)when the surface before the threshold is not suitable for normal use by aircraft						

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
010 09 07 00	Aerodromes Operational Services, Equipment and Installations						
010 09 07 01	Rescue and Fire Fighting (RFF)						
LO	Name the principal objective of a rescue and fire fighting service	x	x	x	x	x	x
LO	List the most important factors bearing on effective rescue in a survivable aircraft accident	x	x	x	x	x	x
LO	Explain the basic information the AD category (for rescue and fire fighting) depends upon	x	x	x	x	x	x
LO	Describe what is meant by the term “response time“ and state its normal and maximum limits	x	x	x	x	x	x
LO	State the reasons for emergency access roads and for satellite fire fighting stations	x	x	x	x	x	x
010 09 07 02	Apron Management Service						
LO	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	x	x	x	x	x	x
LO	State who has a right of way against vehicles operating on an apron	x	x	x	x	x	x
010 09 07 03	Ground Servicing of Aircraft						
LO	Describe the necessary actions during the ground servicing of an aircraft with regard to the possible event of a fuel fire	x	x	x	x	x	x
010 09 08 00	Attachment A to Annex 14, Volume 1 – Supplementary Guidance Material						
010 09 08 01	Calculation of declared distances						
LO	List the four types of “declared distances” on a runway and also the appropriate abbreviations	x	x	x	x	x	x
LO	Explain the circumstances which lead to the situation that the four declared distances on a runway are equal to the length of the runway	x	x	x	x	x	x

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Describe the influence of a clearway, stopway and/or displaced threshold upon the four "declared distances"	x	x	x	x	x	x
010 09 08 02	Radio altimeter operating areas						
LO	Describe the purpose of a radio altimeter operating area	x	x	x	x	x	x
LO	Describe the physical characteristics of a radio altimeter operating area	x	x	x	x	x	x
LO	Describe dimensions of a radio altimeter operating area	x	x	x	x	x	x
LO	Describe the position of a radio altimeter operating area	x	x	x	x	x	x
010 09 08 03	Approach lighting systems						
LO	Name the two main groups of approach lighting systems	x	x	x	x	x	x
LO	Describe the two different versions of a simple approach lighting system	x	x	x	x	x	x
LO	Describe the two different basic versions of precision approach lighting systems for CAT I	x	x	x	x	x	x
LO	Describe the diagram of the inner 300 m of the precision approach lighting system in the case of CAT II and III *Remark – ATPL (A) only*	x					
LO	Describe how the arrangement of an approach lighting system and the location of the appropriate threshold are interrelated between each other	x	x	x	x	x	x
010 10 00 00	**FACILITATION**						
010 10 01 00	Annex 9 - Foreword and essential definitions						
LO	Explain the aim of ANNEX 9 as indicated in the Foreword	x	x	x	x	x	
010 10 02 00	Essential Definitions						
LO	Define the following terms: - Aircraft equipment	x	x	x	x	x	

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
	- airline - airline and operator‘s documents - baggage - cargo - crew member - flight crew member - ground equipment - international airport - pilot-in-command - State of registry						
010 10 04 00	Entry and departure of aircraft						
LO	Describe the purpose and use of aircraft documents - as far as the “General declaration“ is concerned	x	x	x	x	x	
LO	State whether or not a “General Declaration“ will be required by an ICAO Contracting State under normal circumstances	x	x	x	x	x	
LO	State the kind of information to be given by crew members whenever a “General Declaration“ is required by a Contracting State	x	x	x	x	x	
010 10 05 00	Entry and departure of persons and their baggage (crew only)						
LO	Explain the reasons for the use of Crew Member Certificates (CMC) for flight crews and cabin attendants engaged in International Air Transport	x	x	x	x	x	
LO	Explain in which cases ICAO Contracting States shall accept the CMC as an identity document instead of a passport or visa	x	x	x	x	x	
LO	State whether the entry privileges for crews of scheduled international air services can be extended to other flight crews of aircraft operated for remuneration or hire but not engaged in scheduled International Air Services	x	x	x	x	x	

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
010 11 00 00	**SEARCH AND RESCUE**						
010 11 01 00	Essential Search and Rescue (SAR) definitions in Annex 12						
LO	Define the following: alert phase, distress phase, emergency phase, operator, pilot-in-command, rescue co-ordination centre, State of registry, uncertainty phase	x	x	x	x	x	
010 11 02 00	Organisation						
LO	Describe how Contracting States shall arrange for the establishment and prompt provisions of SAR services.						
LO	Explain the establishment of SAR Regions by Contracting States.						
LO	Explain the establishment of Rescue Co-Ordination Centres (RCC) and sub-centres.						
LO	Describe the areas within which SAR services shall be established by ICAO contracting States	x	x	x	x	x	
LO	State the period of time per day within which SAR services shall be available	x	x	x	x	x	
LO	State who delineates SAR regions	x	x	x	x	x	
LO	Describe for which areas rescue coordination centres shall be established	x	x	x	x	x	
010 11 03 00	SAR Co-operation between States and with other services						
LO	Describe why contracting States should develop common SAR procedures	x	x	x	x	x	
LO	Explain why contracting States shall arrange for all SAR aircraft, vessels and local services and facilities which do not form part of the SAR organisation to co-operate fully in SAR operations.	x	x	x	x	x	
010 11 04 00	Operating procedures						
LO	Explain the SAR operating procedures for pilots-in-command at the scene of an accident	x	x	x	x	x	
LO	Explain the SAR operating procedures for pilots-in-command intercepting a distress transmission	x	x	x	x	x	

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
010 11 05 00	Search and rescue signals						
LO	Explain the SAR operating procedures for search and rescue signals						
LO	Explain the signals to be used with surface craft	x	x	x	x	x	
LO	Explain the “Ground-air visual signal code” for use by survivors.	x	x	x	x	x	
LO	Explain the signals to be used for “Air-ground signals”	x	x	x	x	x	
010 12 00 00	**SECURITY**						
010 12 01 00	Essential Definitions in Annex 17						
LO	Define the following terms: Airside, screening, security, security restricted area, unidentified baggage	x	x	x	x	x	
010 12 02 00	General Principles						
LO	State the objectives of security	x	x	x	x	x	
LO	Discuss the details of cooperation with other Contracting States	x	x	x	x	x	
LO	Explain where further information in addition to ICAO ANNEX 17 concerning aviation security is available (as listed in the Attachment to ANNEX 17)	x	x	x	x	x	
010 12 03 00	Organisation						
LO	Be familiar with all actions expected from any ICAO Contracting State concerning security	x	x	x	x	x	
LO	Understand the required activities expected from each ICAO Contracting State concerning security organisation at each airport serving international civil aviation	x	x	x	x	x	
010 12 04 00	Preventive security Measures						
LO	Describe the objects not allowed (for reasons of aviation security) on board an aircraft engaged in international civil aviation	x	x	x	x	x	

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Explain what each ICAO Contracting State is supposed to do concerning originating passengers and their cabin baggage prior to boarding an aircraft engaged in international civil aviation operations	x	x	x	x	x	
LO	State what each ICAO Contracting State is supposed to do if passengers subjected to security control have mixed after a security screening point	x	x	x	x	x	
LO	Explain what has to be done at airports serving international civil aviation to protect cargo, baggage, mail stores and operators supplies against an act of unlawful interference	x	x	x	x	x	
LO	Explain what has to be done when passengers are supposed to board an aircraft who are obliged to travel because of judicial or administrative proceedings	x	x	x	x	x	
LO	Understand what has to be considered if law enforcement officers are carrying weapons on board	x	x	x	x	x	
LO	Describe what is meant by “Access Control” at an aerodrome	x	x	x	x	x	
010 12 05 00	Management of Response to Acts of Unlawful Interference						
LO	Describe the assistance each (ICAO) Contracting State shall provide to an aircraft subjected to an act of unlawful seizure	x	x	x	x	x	
LO	State the circumstances which could prevent a State to detain an aircraft on the ground after being subjected to an act of unlawful seizure	x	x	x	x	x	
010 12 06 00	Operators security programme						
LO	Understand the principles of the written operator security programme each Contracting State shall require from Operators providing service from that State	x	x	x	x	x	
010 12 07 00	Security Procedures in other documents ie Annex 2, 6, 14, Doc 4444						
010 12 07 01	ICAO ANNEX 2 Rules of the Air, Attachment B, Unlawful Interference						
LO	Describe what the PIC should do unless considerations aboard the aircraft dictate otherwise	x	x	x	x	x	
LO	Describe what the PIC should do - if the aircraft must depart from its assigned track	x	x	x	x	x	

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
	- if the aircraft is unable to notify an ATS unit of the unlawful interference						
LO	Describe what the PIC should attempt in regard to broadcast warnings at which level he should proceed if no applicable regional procedures for in-flight contingencies have been established	x	x	x	x	x	
010 12 07 02	ANNEX 6, Chapter 13, Security						
LO	Describe the special considerations referring to flight crew compartment doors with regard to aviation security	x	x	x	x	x	
LO	Explain what an operator shall do to minimize the consequences of acts of unlawful interference	x	x	x	x	x	
LO	Explain what an operator shall do to have appropriate employees available who can contribute to the prevention of acts of sabotage or other forms of unlawful interference	x	x	x	x	x	
010 12 07 03	ANNEX 14, Chapter 3, Physical Characteristics						
LO	Describe what minimum distance an isolated aircraft parking position (after the aircraft is subject of unlawful interference) should have from other parking positions, buildings or public areas	x	x	x	x	x	
010 12 07 04	Document 4444						
LO	Describe the considerations that must take place with regards to a taxi clearance in case an aircraft is known or believed to be subject of unlawful interference	x	x	x	x	x	
010 13 00 00	**AIRCRAFT ACCIDENT AND INCIDENT INVESTIGATION**						
010 13 01 00	Essential definitions in Annex 13						
LO	Define the following: Accident, aircraft, flight recorder, incident, investigation, maximum mass, operator, serious incident, serious injury, State of design, State of manufacture, State of occurrence, State of the operator, State of registry	x	x	x	x	x	
LO	Recall the definition of the term “Accident“ in general terms	x	x	x	x	x	
LO	Define the difference between “Serious Incident“ and “Accident“	x	x	x	x	x	

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		Aeroplane		*Helicopter*			*IR*
Syllabus Reference	**Syllabus and Learning Objectives**	ATPL	CPL	ATPL/IR	ATPL	CPL	
LO	Determine whether a certain occurrence has to be defined as a serious incident or as an accident	x	x	x	x	x	
010 13 02 00	Applicability of Annex 13						
LO	Describe the geographical limits, if any, within which the specifications given in ANNEX 13 apply	x	x	x	x	x	
010 13 03 00	ICAO Accident and Incident investigation						
LO	State the objective(s) of the investigation of an accident or incident according to Annex 13	x	x	x	x	x	
LO	Understand the general procedures for the investigation of an accident or incident according to Annex 13						
LO	Recognise the description of an accident or incident	x	x	x	x	x	
010 13 04 00	EU Accident and Incident Investigation						
LO	Be familiar with the EC procedures for Accident and Incident Investigation relevant to pilots in accordance with EU Council Directive 94/56 dated 21.11.94 (Accident Investigation)	x	x	x	x	x	