Flight Operations Officer (Flugdienstberater) leraning objectives

for the practical training according $112 LuftPersV, from November 2009

General Objectives
The FOO-student must be firmly introduced and aware about the FOO-responsibilities and functions
and must demonstrate the competence by using the normal procedures and tools, which will include the OM-A, -B, -C and -D
and other IT related data provisions, sotwaretools and handbooks in use within the OCC of the repective AOC-holder-

Practical examination
The examination will take place in the normal environment of the respective Flight Operations Departement, which is normally
the Operations Control Center of the AOC-holder.
The student should calculate a normal flightplan out of the network of the respective AOC-holder.
Based on that flightplan, the student must demonstrate all required procedures and methods of decission making
and should find answers to the specific questions related to the results, the data, the OFP-format and all other flightplan related questions.
Additional questions about general aspects on basis of rules and data from the OM-A and -B will be addressed.

The learning objectives in this document will provide the overview about the relevant questions from the CAA-Examiner.
and should be used by the instructor and the student during the practical training as a reference and also for documentation.
This documentation must be available for the responsible FTO and also, during the examination, fot the CAA-examiner.

Requirements

Basics	Categorize decode define

Mathematics	construct compute

Verbal requirements	compare state name (sketch) enter extract

Application	distinguish
	interpret
	apply

Practise	find out reason
	name effect on practise (nep)
	check results
	Make decisions

Responsibility

Requirements	Subjects	Subject details	Expectation
state	Responsibiliy for the issue and the update of the OM-A, -B, -C, -D		show the postholder name on the actual organization chart or list
	Responsibility of the individual postholder	Flight Operation	show the respective chapter of OM-A and explain
		Ground Operation	
		Training	
		Maintenance	
	Responsibility and function of the Accountable Manager		
	Responsibility and function of the Quality Manager		
	Responsibility of the FOO		
	Respponsibility of the PIC		
	Who has the authority to cxx, reroute, delay, reschedule flights?		
extract	The above data from the OM		
	Actual relevant AOC approvals		
		Allweather operations	
		IFR Commercial, VFR	
		RNAV	
		RVSM	
		RNP	
		MNPS	
		ETOPS	
		DGR	
	actual approvals and legal documents		
		Certificate of airworthiness	
		Certificate of Insurance and third party liability	
		Certificate of registration	
		Noise certificate	
state and nep	the relevance of the above documents		

Altimetry

Requirements	Subjects	Subject details	Expectation
define	QNH		SL, hPa
	QFE		Elev. hPa
	Standard		ISA-1013hPa, 29,92 inHG
	Transition altitude		published by local ATC, QNH Referenz actual - 1013, Altitude-FL, ATIS
	Transition layer		Layer btwn Tr. level-alt., Min. 1000ft
	Transition level		published by local ATC, QNH Referenz 1013-actual, FL-Alt, ATIS
	MSA	as per OM-A	
	MORA	as per OM-A	
	MEA	as per OM-A	
extract	MSA	from OM-C	
	MORA	from OM-C	
	MEA	from OM-C	
compute	Pressure Altitude	based on actual data, flightplan	

Fuel Policy

Requirements	Subjects	Subject details	Expectation
define	Contingency fuel	Contingency en-route alternate	
	Alternate fuel		
	Final reserve fuel		
	Additional fuel		
	Extra fuel		
	Company fuel		Tankering, Company procedures
	Minimum take-off fuel	Standard calculation	
	No alternate procedure		Additional requirements
	Isolated aerodrome		
	Pre-determined point procedure		
	Reduced Contingency Fuel Procedure		
	Fixed speed operation		
	Variable speed operation	LRC, ECO, CI	
extract	Trip fuel	from flightplan calculated	
	Contingency fuel	from flightplan calculated	
	Minimum take-off fuel	from flightplan calculated	
compute	Reduced Contingency Fuel	based on actual data, flightplan	
	No alternate procedure	based on actual data, flightplan	
	Isolated aerodrome	based on actual data, flightplan	
	Pre-determined point procedure	based on actual data, flightplan	
	Time based on xtra-FF	based on actual data, flightplan	
	EXTRA Fuel	based on actual data, flightplan	
name	Contingency en-route alternate		
(by skech)	Source of information	for company fuel policy and/or limitations	

WX-Format

Requirements	Subjects	Subject details	Expectation
Extract, decode	METAR/TAF format	Period of validity	by using the Briefing package
		Surface wind velocity	
		Prevailing visibility	
		Runway visual range (RVR)	
		Significant weather	
		Air temperature/dew point/spread	
		QNH	
		Supplementary information	
		Period of validity	
		Surface wind velocity	
		Prevailing visibility	
		Significant weather	
	Weather charts	Frontal systems	
		Period of validity	
		Temperature situation	
		Wind situation	
nep		CAT-areas	inflight hazards of significant weather
		CB´s & icing	work out countermeasures
		Jetstreams	
		Volcanic ash	
		Tropause heights	
		ITCZ	
		Tropical cyclones	
extract, decode	lowest ceil./vis.		
make decision	if below minima		
		European	
		USA	
		Canada	
		Russia	
		China	
		SIG WX chart	
		Upper Air Data	
		Icing Conditions	< +10°C TAT + visible moisture

LDG-Minima

Requirements	Subjects	Subject details	Expectation
compare and nep	Influence of failed or downgraded equipment	Outage of GP/GS	
		Outage of ILS Stby Power	
		Outage of RCL	
		Outage of RL/RWY edge lights	daylight only
extract	Weather Reports/Forecasts		
apply	Period of validity		
make decisions	BECMG, FM, TL		
	TEMPO, TEMPO FM, TEMPO TL		
	Transient/Showery Conditions.	define SHA	
	Persistant Conditions		
	PROB30 TEMPO		to be ignored?
	Mean wind and gusts		gusts to be ignored?
compute	Resulting CWC and TWC	for expected RWY in use	
extract	Limited CWC and TWC from OM-B		
nep	Automatic versus manual landing	in view of max.CWC	
make decisions	Expecteed RWY in use		
extract	Landing Minima of the Destination Airport	LDG-Normal	
		LDG-Minima after Glide path outage	
		LDG-Minima after Approach Light System outage	
		LDG-Minima after RWY-light outage	
extract and define	Best Approach, best LDG-minima		
	DA/DH and MDA/MDH		
	Aircraft category		
	Airport elevation		
	TORA, TODA, ASDA		
	Visibility		
	RVR		
	cloud base and ceiling	state oktas for ceiling-definition	OVC, BKN
make decisions	best LDG-minima - best approach	for the type of operation	

NOTAM

Requirements	Subjects	Subject details	Expectation
Define			
or decode	SNOWTAM	DAY/Time group	Example
	ASHTAM	UFN	localize on map
nep	Volcanic Ash Advisory	EST	
	NOTAM	GP	
	BIRDTAM	GS	
	Taifun/Hurricane advisory	RL	
		RCL	
		Class I	
		Class II	
		Q-groups	
name	Distribution of notam	via EAD European AIS Database	
	ECAC	via AFTN	
	outside ECAC		

T/O Minima

Requirements	Subjects	Subject details	Expectation
extract	T/O-Minima from OM-C		
apply	Minima-data	in respect of NOTAM	
make decisions	Identify the RWY to be used for Take Off		
	If T/O is legal		
exract	OM-procedures and data in view of T/O-minima requirements		
apply	Procedures if T/O minima are not fulfilled	describe the consequences	
	Procedures if LDG-minima at departure are not fulfilled	describe the consequences	
make decisions	T/O ALTN required?	describe the consequences if yes	Max. air time 60' if 2 Eng 120' if more than 2 Eng, or ETOPS approval

ALTN Selection

Requirements	Subjects	Subject details	expectations
compare	suitable airport - adequate airport	Ref. OM-A, EU-OPS	suitable is adequate with consoderation of weather
	landing minima - planning minima	landing	inflight check No Planning minima after T/O not restricted, realistic
			more restrictive apply planning minima table add. values
		planning	utilized in flightplanning
state	utilization of suitable airport	Ref. OM-A, EU-OPS	destination, T/O Alternate ETOPS alternate
	utilization of adequate airport	Ref. OM-A, EU-OPS	enroute alternate, overwater operations
	possibility to change planned alternate	criteria	poss. change by ATC final decision by PIC
			authorized airport, distance/fuel, political situation immigrations
			for passengers, fuel, company policy,
	operational aspects for ALTN-selection		handling facilities and contracts, economical aspects
			Two alternates, higher fuel amount required,
nep	unsuitable destination	planning OFP ATC-Flightplan	Two alternates in ATC plan in correct sequence
			identify suitable alternates in range not plannable without,
	unsuitable Destination Alternates	planning	if not no-alternate-policy
			curfew NOTAM closure (accident, facilities),
			weather (CB, wind, snow), RFC downgraded
define	reasons for unsuitable airport	Check conditions of adequate airports: AIP and NOTAM check. WX-Pla	company regulation (bad fuel, political)
			two, physically separated runways flight time below 6 hours
	no alternate planning	OM-A, EU-OPS	CAVOK company policy.

RWY-report

Requirements	Subjects	Subject details	Expectation
State:	Transmision of rwy state group Method of measurement		State the ays of distribution of rwy-report messages as well as the method of measurement (friction tester, etc)
Decode	Rwy state group		Decode rwy reports based on flightplan calculated, if any
Interpret	Braking Action/Coefficient	Dfiference btwn BA/friction coefficent	
nep	Effects of rwy contamination on take -off and/or landing performance	aspects of winter season	
Decode		RWY Report 26098776 (example) RWY Report 75093445 (example SNOTAM (example)	

CWO, Cold Weather Operation

Requirements	Subjects	Subject details	Expectation
extract	CWO Procedures and data from the OM		
define	HOT	Hold Over Time	
	One-step and Two-step procedure		
	Fluid Type 1,2 and 4	view of HOT, Mixture and costs	
	De-Icing		
	Anti-Icing		
	RWY contamination	show tables from OM-B	
name and nep	Anti-ice information after anti-icing was done	Info to Crew, reason, contents	
	Braking Action, method of measurement	and data-reliability	
	Coldsoak effect	general risk and influence to DOC	

Landing Performance

Requirements	Subjects	Subject details	Expectations
compare	LDA		
	LDR		
	actual/demonstrated LD		without security margins, LDR=167% of demonstrated LD
nep	influence of approach speed on landing distance	Speed categorie: A - E	higher speed => longer distance
state	use of thrust reverser		influence to LD during RWY-contamination, MEL?
	use of anti skid		considered in calculation
nep	factors of influence on landing distance		RWY cond., appr. speed corr., GW, HWC-TWC, flapsetting, PA, OAT, MEL/CDL-Items. No Stopway.
nep	Overweight Landing avoidance	Ref OM-A	increase tripfuel by using amount of (%) from contingency fuel
extract	Landing Climb Performance (Gear down)		
extract	Approach Climb Performance (Gear up)		
state	Manual Landing		
distinguish	Auto brake/manual brake		
compute	Landing Distance Required	OM-B	+15% for wet RWY

T/O Performance

Requirements	Subjects	Subject details	Expectations
Define	TORA	Ref OM-C	declared distance available for ground run of a/c
	TODA	Ref OM-C	TORA + CWY
	ASDA	Ref OM-C	TORA + SWY
	Clearway	Ref OM-C	end of rwy, clear of obstacle, for initial climb, no ground run
	Stopway	Ref OM-C	end of rwy, wide enough, able to support a/c during aborted take-off
nep	Antiskid		incl. in calc of MTOW
	Reverser		not incl. in calc of MTOW
Define	Balanced Field length		ratio ASDA/TODA, optimization of maximum weight (by sketch)
			OAT, PA, RWY condition, HWC-TWC-CWC, V1/V2 ratio
define, nep	Factors of influence to T/O performance limitations		Bleed Air, MEL/CDL-Items, GW, Flapsetting, RWY slope, CG
Compute	v1, v2, vr	pilot's workpad, OM-B	compute for given flight and conditions with available means
Name	source of information		AIP, NOTAM, METAR, TLB, W&B, OM-A-C
Name, nep	measurement of braking action	Reliability/relevance of information	Frequent change of conditions, no high reliability
Define	Climb limitations	second segment	climb gradient
Define, nep	Factors of influence to climb performance limitations		OAT, PA, V1/V2 ratio, Bleed Air, MEL/CDL-Items, GW, Flapsetting
Define	Obstacle limitations	30ft, Net Flight Path, Departure sector	climb gradient
			OAT, Wind, PA, V1/V2 ratio, Bleed Air, MEL/CDL-Items, GW
Define, nep	Factors of influence to Obstacle performance limitations		Flapsetting, position/height of obstacle, IMC-VMC

Useability of aerodromes

Requirements	Subjects	Details	Expectations
Define	Adequate Airport, Operators Airport Authorization requirements (incl. e	Ref to OM-A	Example from AAL
state	PCN-ACN		
	Factors of influence	Flexible/Rigid, CBR	
compute	Planned GW in relation to ACN		calculate for certain a/c-type, use of formula
state, nep	excemption-rules		
state	LCN, SIWL, Tire pressure		
state, nep	Factors of influence	% of GW on MGL, CG, tire press.	
compute	GW in relation to LCN		use of graph, use of formula
Decode/nep	RFFS	Rescue Fire fighting Servies Cat.	Show min.FFC for certain A/C
Extract	Hours of Operation	OM-C	Factor of influence: NOTAM, daylight (SR/SS)
Extract	Airports from LOA/AAL	OM-C/A	List of Airports
Distinguish	Airport Qualification Categorie A, B, C	OM-A	
Extract, nep	Airport of Entry		

MEL CDL

Requirements	Subjects	Subject detail	expectation
Define	Flight Day	Ref to OM-B	24hrs midnight to midnight
	Rectification Intervall	Ref to OM-B	Example: A-D
Distinguish, compare	MEL - CDL	Aircraft systems versus Aerodynamic configuration	
Extract, state	Operator Technical Information System/Source (Handicap Item List)		
Extract, NEP	Example MEL	APU inop	
		HF inop	
		Antiskid inop	
		Air Cycle Machine inop	
		Pack inop	
		standby Horizon inop	
		NAV Light	
		Beacon	
		Autopilot, Flight Director	
		TCAS	
Extract, NEP	Example CDL	Flap track fairing missing	
		Nose gear landing light missing	
		Horizontal stabilizer leading edge missing	
		Elevator missing	
		Vortex generator missing	

ETOPS

Requirements	Subjects	Subject details	Expectation
Define	Conditions of ETOPS approval	number of engines, Procedures, Data	Ref to OM-A
		authorizationby LBA acc.JAR-OPS	
Define	Adequate Airport	as per OM-A	
	ETOPS-threshold, 60 minutes	Still air distance, One ENG out	
NEP	MEL/CDL	ETOPS-criteria, System redundancy	electric,fuel,hydraulic,apu.emerg. Equip
			fire protection,nav.equip,comm.equip
			3 or more source of elctrical power nec.
Distinguish	Adequate versus Suitable Airport	Criteria OM-A	WX

Area of Operation

Requirements	Subjects	Subject details	Expectations
			short distance => eventually longer routeing because of need
nep	maximum distance over water	Ref. OM-A/B	for adequate airports islands might be out of range
name	required aircraft equipment for over water ops		survival, raft, life vests
nep	fire extinguisher in hold		none available => adequate airport in reach of xx nm or mins
define	extended overwater ops		MEL-chapter
compute	distance from adequate airport	display on chart	use any certified tool
	Oxygen requirements	OM-A/B	Diversiontime above FL100 after decompression
state	Area of operation	Ref. AOC/OM-A	Restricted to Europe, Atlantic or unrestricted

DGR, Dangerous Goods Regulations

Requirements	Subjects	Subject details	Expectation
extract	DGR-procedures and data from OM-A		
define	drill codes		
	UN-number		
	inherent and additional risks of DG		
	CAO		
	Transport Index		
	DG-classes		
	incompabilities for the loading of DG		
name	responsibility of shipper	In ref. to OM-A	
	responsibility of Cargo Acceptance	In ref. to OM-A	
	responsibility of the Flight Crew	In ref. to OM-A	
	responsibility of the FOO	In ref. to OM-A	
	responsibility of the operator	In ref. to OM-A	
	contents of the NOTOC		
find out reason	of NOTOC		
nep	factors of influence of DG to flightplanning		ground times, overflight of specific states or regions, max. flighttime limitation due to transport index (RRY)

OFP

Requirements	Subjects	Subject details	Expectation
state	related data/procedure	OM-A-C	
compare and nep	elevation DEST / ALTN		
make decisions	ETA (to keep schedule)	Routing / speed	
apply	Specific payload		
nep	- NOTOC		
make decisions	- Routing		
define	ZFW	DOW+payload, MZFW	
nep	ADDFUEL	Weather, Routing, Comm	
		Limitations (Performance, Structural).	
define	LW	Increase Tripfuel by % of Contg fuel	
define	TOW	Limitations (Performance, Structural, LW)	
define, nep	Speeds	Econ, const. Mach, LRC, MRC	
nep	NAT-Procedures	Track, MTT, MDT, MFT, INSfailure, NERS, NARs, non common	MNPS User manual
apply, compute	avge FF / avge WC	crosscheck	
define	T/O ALTN	criteria for two / or more than two Eng.	
apply	TRK	True, Mag, Grid	
apply, compute	Distance	SID, STAR, APPROACH distance from OM-C	
		OM-C data, OM-B chart opt. altitude,	
nep	LVL	specific country regulations even/odd, OTS	
compute	TEMP	ISA, ISA DEV, Climb	
define, nep	Wind	AVGE, Prognostic, upper air data	
extract	TAS	OM-B	
compute	GS	TAS-WC	
define, compute	Minimum Diversion Fuel	Remaining Trip, ALTN, Final Reserve	
define, compute	REMFUEL		
define, compute	Max possible EXTRA		
define, compute	TANKCAP	by using specific/standard fuel density	
define, compute	Fuel savings/Tankering	by using given data $/t	
apply	ATC	ITEM 19 supplementary information	
define, apply, nep	Briefing package Ref OM-A	OFP, NOTAMS, WX-Forecast, WX-charts, Company information	
name	Back-up procedures	alternative system/procedure to obtain briefing package	

Crew Duty Times

Requirements	Subject	Subject details	Expectation
Extract	Dutytime/dutytime limitations	Window of circadian low (WOCL), number of legs, enlargements	EU-Ops 1-Subpart Q
	Check-in	EU-Ops 1-Subpart Q	
	Proceeding	EU-Ops 1-Subpart Q	
	Restperiod	EU-Ops 1-Subpart Q	
	Crew composition	Ref. OM-A	Ref. OM-A
	Reduced cabin crew operation	Ref. OM-A	from company OM-A
Compute	Actual dutytime	based on actual operation	
	Maximum dutytime	based on actual operation	
Name	Source of information	Ref. OM-A	from company OM-A
nep	Exceedance of duty time limitations	consequences, legal solution or work around	
Define		Dutytimelimit	
Extract		Minimum Rest period	
		Crew Composition	

Security

Requirements	Subjects	Subject details	Expectations
Apply, nep	ERAP/ERP/Emergency folder OM-cahpter 11		
State, nep	Explain Bomb search procedure	Notification charts	show in ERP
		Bomb search procedure	
State, extract	Hijacking	A/C sealing	show in ERP
		admission to A/C	
Interpret, distinguish	Incidents - Accidents	Ref. OM-A chaper 11	
apply, nep	subject to report incident, accident	Ref. OM-A chaper 11	demonstrate procedure

ATC-Regulations

Requirements	Subjects	Subject details	expectations
nep	HF-inop, LRNS inop	MEL criteria, Rerouting	blue sprouce routes, VHF-coverage, special MNPS permission
	RVSM incapability	MEL criteria	below FL280, Item 10 ats-flightplan, letter W
	8,33 kHz	MEL criteria	Below FL195, Item 10 in ATS-Flightplan, letter Y
Define	MNPS Airspace	MEL criteria	north-atlantic crossing, special navigational equipment, hf and selcal, MEL-Items, Item 10 in ATS-Flightplan, Letter X, min. nav. performance specification
Name	OTS		oceanic tracks east and westbound, time limits, validity, puplication/source
Name, nep	scope of CFMU		eurocontrol, flow management, coordinates slots, regulations, Helpdesk
	scope of IFPS		MAN, ACK or REJ flightplans in europe, check conformity with RAD and AIP, AFTN/SITA message distribution
	region of control of CFMU		ECAC
Define	use of CHMI (CFMU-tool)		slothandling, sector counts and availability, SLOT allocation and definition