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Introduction:

To fully appreciate and understand subject 034- Performance (Helicopters), the applicant will benefit from background knowledge in subject 082 – Principles of Flight (Helicopters)

Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
030 00 00 00	**FLIGHT PERFORMANCE AND PLANNING**						
034 00 00 00	**PERFORMANCE - HELICOPTER**						
034 01 00 00	**GENERAL**						
034 01 01 00	**Performance Legislation**						
034 01 01 01	**Airworthiness Requirements**						
LO	Interpret the EASA airworthiness requirements in CS 27 and CS 29 as related to helicopter performance			x	x	x	
LO	Name the general differences between helicopters as certified under CS 27and CS 29			x	x	x	
034 01 01 02	**Operational Regulations**						
LO	Interpret the European operations regulation JAR-OPS 3			x	x	x	
LO	Name and define the performance classes for commercial air transportation according to JAR-OPS 3.470			x	x	x	
LO	Use and interpret diagrams and tables associated with CAT A and CAT B procedures in order to select and develop class 1, 2 and 3 performance profiles according to available heliport size and location (surface or elevated). See JAR–OPS 3 Subpart F, G , H & I			x	x		

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Use and interpret diagrams and tables associated with CAT A and CAT B procedures in order to select and develop class 3 performance profiles according to available heliport size and location (surface or elevated). See JAR–OPS 3, Subpart F, G, H & I					x	
LO	Interpret charts showing minimum clearances associated with Category A & B procedures as defined in JAR-OPS 3 Subpart F, G, H & I.			x	x	x	
034 01 02 00	**General Performance Theory**						
034 01 02 01	**Stages of Flight**						
LO	Explain the following stages of flight: - Take-off - Climb - Level flight - Descent - Approach and landing.			x	x	x	
LO	Describe the necessity for different take-off and landing procedures			x	x	x	
034 01 02 02	**Definitions and Terms**						

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Define the following terms used in JAR-OPS 3, Subparts F, G, H, & I : - Category A - Category B - Performance class 1,2 and 3 - Congested Area - Elevated Heliport - Helideck - Heliport - Hostile Environment - Maximum Approved Passenger Seating Configuration - Non-hostile Environment - Obstacle - Rotor radius (R) - Take-off Mass - Touchdown and Lift-off Area (TLOF)			x	x	x	

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Define the following terms used in JAR-OPS 3, Subparts F, G, H, & I : - Reported Headwind Component - Take-off Decision Point (TDP) - Defined Point After Take-off (DPATO) - Take-off Distance Required (TODR) - Take off Distance Available (TODA) - Distance (DR) - Rejected Take-off Distance Required (RTODR) - Rotation Point (RP) - Exposure Time - Maximum Permitted Exposure Time - Committal Point (CP) - Defined Point Before Landing (DPBL) - Landing Decision Point (LDP) - Landing Distance Available (LDA) - Landing Distance Required (LDR) - Safe Forced Landing - Take-off Safety Speed (V_1) - Take-off Safety Speed for Cat A Rotorcraft (V_{TOSS}) (V_2) - Velocity Landing Gear Extended (V_{LE}) - Velocity Landing Gear Operation (V_{LO}) (For CPL only terms related to performance class 3)			x	x	x	

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Understand the meaning and significance of the abbreviations AEO, OEI, HIGE and HOGE.			x	x	x	
LO	Define the terms climb angle and climb gradient			x	x	x	
LO	Define the terms flight path angle and flight path gradient			x	x	x	
LO	Define $V_{maxRange}$ (speed for maximum range) and V_{maxEnd} (speed for maximum endurance)			x	x	x	
LO	Define and calculate the gradient by using power, wind and helicopter mass			x	x	x	
LO	Explain the terms service ceiling, absolute ceiling and single engine service ceiling			x	x	x	
LO	Understand the difference between Hovering in Ground Effect (HIGE) and Hovering out off Ground Effect (HOGE).			x	x	x	
034 01 02 03	**Influencing Variables on Performance**						
LO	Explain how the following factors effect helicopter performance: - Pressure Altitude - Humidity - Temperature - Wind - Helicopter Mass - Helicopter Configuration - Helicopter Centre of Gravity - Touch-down and Lift-off Area (TLOF)			x	x	x	
034 02 00 00	**PERFORMANCE CLASS 3 - SINGLE-ENGINE HELICOPTERS ONLY**						
034 02 01 00	**Definitions of Speeds used**						

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Define the following speeds: - Speed for best angle of climb Vx - Speed for best rate of climb Vy - Never Exceed Speed V_{NE} - Maximum Operation Speed V_{MO} - Maximum Speed in Level Flight with maximum continuous power V_H			x	x	x	
034 02 02 00	**Effect of Variables on Single-Engine Helicopter Performance**						
LO	Determine wind component, altitude and temperature for hovering, take-off and landing			x	x	x	
LO	Explain that operations are only from/to heliports and over such routes, areas and diversions contained in a non-hostile environment where a safe forced landing can be carried out (Consider exception: Operations may be conducted in a hostile environment when approved under JAR-OPS 3.005)			x	x	x	
LO	Explain the effect of temperature, wind and altitude on climb, cruise and descent performance			x	x	x	
LO	Explain that approval is required to operate to or from elevated heliports in a non-hostile environment with exposure time to a power unit failure			x	x	x	
034 02 03 00	**Take-off and Landing**						
LO	Explain the take-off and landing requirements in accordance with JAR OPS 3			x	x	x	
LO	Determine the following distances: - Take-off distance - Landing distance - Maximum allowed take-off and landing mass			x	x	x	

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Explain that mass has to be restricted to HIGE			x	x	x	
LO	Explain that if HIGE is unlikely to be achieved then mass must be restricted to HOGE						
LO	Calculate the correct parameters to operate a multi or single engine helicopter according to Performance Class 3 with AEO and OEI for take-off and landing			x	x	x	
034 02 04 00	**Climb, Cruise and Descent**						
LO	State that the helicopter must be capable of flying its intended track without flying below the appropriate minimum flight altitude and be able to performing a safe forced landing			x	x	x	
LO	Explain the effect of altitude on the maximum endurance speed			x	x	x	
LO	Determine the cruise true airspeed (TAS)			x	x	x	
LO	Calculate the correct parameters to operate a multi or single engine helicopter according to Performance Class 3 with AEO and OEI when en-route			x	x	x	
034 02 05 00	**Use of Helicopter Performance data**						
034 02 05 01	**Take-off**						
LO	Find the maximum wind component			x	x	x	
LO	Find the take-off distance for certain conditions			x	x	x	
LO	Find the maximum allowed take-off mass for certain conditions			x	x	x	
034 02 05 02	**Climb**						
LO	Find the time, distance and fuel to climb for certain conditions			x	x	x	
LO	Find the rate of climb under given conditions and the best rate of climb speed VY			x	x	x	
034 02 05 03	**Cruise**						
LO	Find the cruise true airspeed (TAS) and fuel consumption for certain conditions			x	x	x	

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Calculate the range and endurance under given conditions			x	x	x	
034 02 05 04	**Landing**						
LO	Find the maximum wind component			x	x	x	
LO	Find the landing distance for certain conditions			x	x	x	
034 03 00 00	**PERFORMANCE CLASS 2**						
034 03 01 00	**Definitions of Terms and Speeds**						
LO	Define the following terms: - Critical engine - Approval to operate with exposure time - Non-hostile environment - Non-congested hostile environment - Defined Point After Take-off (DPATO) - Defined Point Before Landing (DPBL) - Rejected Take-off Distance Required (RTODR) - Take-off Distance Required (TODR) - Take-off Flight Path			x	x		
LO	Explain under what circumstances approvals are granted accordance to JAR-OPS 3, Subpart H, 3.517			x	x		
LO	Explain the effect of the critical engine inoperative on the power required			x	x		
LO	Explain the effect of engine failure on controllability of the helicopter under given conditions			x	x		

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
034 03 02 00	**Effect of Variables on Helicopter Performance**						
034 03 02 01	**Take-off**						
LO	Determine the take-off mass taking account of: - Pressure altitude - Ambient temperature - Take-off procedure to be used - Percentage of head/tail wind that may be used			x	x		
LO	Remaining visual up to DPATO			x	x		
LO	Explain operations without exposure time in the event of a critical power unit failure up to and including DPATO and after DPATO from surface level heliports			x	x		
LO	Explain operations with exposure time in accordance with JAR-OPS 3 [3.520(a)(3 & 4) and App.1 to 3.517 (a)] from: - elevated heliports or helidecks in a non-hostile environment after exposure time up to DPATO and after DPATO - elevated heliports or helidecks in a non-congested hostile environment to continue flight at the end of exposure time and during exposure time from which a safe forced landing may not be possible			x	x		
LO	Explain the distance clearance parameters			x	x		
LO	Interpret obstacle clearance at take-off			x	x		
LO	Describe the effect of engine failure on take-off climb performance			x	x		
034 03 02 02	**Climb, Cruise and Descent**						
LO	Explain rates of climb			x	x		

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Specify the minimum rate of climb in the case of a power unit failure			x	x		
LO	Name the lateral zone of obstacles to be considered			x	x		
LO	Explain the effect of mass on the speed for best angle, and best rate of climb and descent			x	x		
LO	Explain the effect of temperature and altitude on the fuel flow under given conditions			x	x		
LO	Explain the effect of wind on the maximum range speed and speed for maximum climb angle			x	x		
LO	Describe the effect of loss of engine power on climb and cruise			x	x		
LO	Understand and explain drift down techniques and navigational accuracy in accordance JAR-OPS 3.530			x	x		
LO	Determine minimum obstacle clearance height prescribed in JAR-OPS 3.250 and 3.530			x	x		
034 03 02 03	**Landing**						
LO	Determine the regulation factors for landing in accordance with JAR-OPS 3			x	x		
LO	Explain and calculate that the landing mass must be adjusted to achieve 150 ft/min climb at 300 m (1000 ft) with a critical power unit inoperative*/*one engine inoperative (OEI) taking into account: - Pressure altitude of the heliport - The expected ambient temperature - The landing technique to be used - The wind component - Changes in the mass of the helicopter in flight			x	x		
LO	The flight must be carried out visually from defined point before landing (DPBL) to touchdown			x	x		

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Explain that landing techniques vary depending on the location and OEI-procedures			x	x		
LO	State that landing on surface level heliports (without exposure time) must permit: - the ability to continue the flight with OEI before DPBL - allow a safe forced landing on the heliport or surface OEI at or after DPBL			x	x		
LO	State that the landing mass on Helidecks or Elevated Heliports in a non-hostile environment and in a non-congested hostile Environment must permit: - the ability to continue the flight with OEI before DPBL - the ability to carryout a safe forced landing on the heliport or surface OEI between the DPBL and exposure time - may not allow for a safe forced landing with OEI during exposure time			x	x		
034 03 03 00	**Use of Helicopter Performance data**						
034 03 03 01	**Take-off**						
LO	Calculate the defined point after take-off (DPATO) for certain conditions			x	x		
LO	Calculate the rejected take-off distance required (RTODR) for certain conditions			x	x		
LO	Calculate the take-off distance required (TODR) for certain conditions			x	x		
LO	Calculate the take-off flight path profile			x	x		
LO	Calculate all engine and critical engine out take off climb data			x	x		
LO	Calculate obstacle clearance take off climb data			x	x		
034 03 03 02	**Climb**						

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Calculate the rate of climb and climb gradient under given conditions			x	x		
LO	Calculate the single engine ceiling for certain conditions			x	x		
LO	Calculate obstacle clearance climb data			x	x		
034 03 03 03	**Cruise and Descent**						
LO	Find power settings, cruise true airspeed (TAS) and fuel consumption for certain conditions			x	x		
LO	Calculate range and endurance data under given conditions			x	x		
034 03 03 04	**Landing**						
LO	Find the defined point before landing (DPBL) for certain conditions			x	x		
LO	Calculate the landing distance required (LDR) for certain conditions			x	x		
034 04 00 00	**PERFORMANCE CLASS 1 - HELICOPTERS CERTIFICATED UNDER CS 29 ONLY**						
034 04 01 00	**Take–off**						
LO	Calculate the take-off mass taking account of: - Pressure altitude - Ambient temperature - Take-off procedure to be used - Percentage of head/tail wind that may be used-			x	x		
LO	Explain that the flight must be carried out visual up to TDP			x	x		
034 04 01 01	**Definitions of Terms used**						

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Remember definitions given under syllabus reference 034 03 01 00 and explain the following speeds in accordance with CS 29: - Speed at take-off decision point (V_1) - Take-off safety speed for Cat A rotorcraft (V_{TOSS}) (V_2) - Take-off decision point (TDP)			x	x		
034 04 01 02	**Take-off Distances**						
LO	Explain the effects of the following variables on the Flight path and take-off distances: - Take-off with HIGE or HOGE - Take-off procedure - Obstacle clearances both lateral and vertical - Take-off from non-elevated Heliports - Take-off from elevated Heliports or Helidecks - Elevation of Touchdown and Lift-off Area (TLOF), elevated/ non-elevated Heliport			x	x		
LO	Explain the effects of the following variables on take-off distances: - Mass - Take-off configuration - Bleed Air configurations			x	x		
LO	Explain the effects of the following meteorological variables on take-off distances: - Wind - Temperature - Pressure altitude			x	x		

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Explain the take-off distances for specified conditions and configuration for all engines operating (AEO) and one engine inoperative (OEI)			x	x		
LO	Explain the effect of obstacles on the take-off distance required			x	x		
LO	Explain the influence of V_1 and V_{TOSS} speeds on take-off distance			X	x		
LO	State the assumed reaction time between engine failure and recognition			x	x		
LO	Explain the effect of calculation of TDP and V_1 on the take-off distance required			x	x		
034 04 01 03	**Rejected Take-off Distance Required**						
LO	Explain the rejected take-off distance required for specified conditions and configuration for all engines operating and one engine inoperative			x	x		
LO	Explain the effect of calculation of V_1 on the rejected take-off distance required			x	x		
LO	Explain the time-to-decide allowance (decision time) and deceleration procedure			x	x		
034 04 01 04	**Landing Distance from TDP with V_1 to a complete Stop on the Ground**						
LO	Understand relationship of take off distance, landing distance from TDP with V_1 to a complete ground stop			x	x		
034 04 01 05	**Maximum Mass for Take-off Procedure**						
LO	Calculate the maximum mass for the take-off procedure under given conditions			x	x		
034 04 01 06	**Take-off Climb**						
LO	Define the segments of the take-off flight path			x	x		
LO	Determine the effect of changes in the configuration on power and speed in the segments			x	x		
LO	Determine the differences in climb gradient requirements for AEO and OEI			x	x		
LO	State the minimum altitude over the take-off path when flying at V_1 to V_{TOSS}			x	x		

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Explain the effects of Helicopter and meteorological variables on the take-off climb			x	x		
LO	Describe the influence of airspeed selection, acceleration and turns on the climb gradient, best rate of climb speed and best angle of climb speed			x	x		
034 04 01 07	**Obstacle-limited Take-off**						
LO	Describe the operational regulations for obstacle clearance of the take-off flight path in the departure sector			x	x		
LO	Define the minimum parameters for take-off flight path with one engine inoperative in accordance with CS 29			x	x		
LO	Determine the effects of helicopter variables and meteorological variables on determination of limited take-off mass			x	x		
LO	Determine the obstacle limited take-off mass			x	x		
034 04 01 08	**Performance limited Take-off Mass**						
LO	Define the performance limited take-off mass			x	x		
034 04 01 09	**Use of Helicopter Flight Data**						
LO	Determine from the helicopter performance data sheets the maximum masses that satisfy all the regulations for take-off			x	x		
LO	Determine from the helicopter performance data sheets the relevant speeds for specified conditions and configurations			x	x		
034 04 02 00	**Climb**						
034 04 02 01	**Climb Techniques**						
LO	Explain the effect of climbing with best rate of climb speed (V_Y) at a constant IAS.			x	x		

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Explain the effect of the failure of one power unit (OEI) on: - Reduction in acceleration and vertical performance - Rate of climb required - Both lateral and vertical obstacle clearances			x	x		
034 04 02 02	**Influence of Variables on Climb Performance**						
LO	Explain the effect of mass on the rate of climb			x	x		
LO	Explain the effect of meteorological variables			x	x		
LO	Explain the effect of acceleration during a climb with constant IAS			x	x		
034 04 02 03	**Use of Helicopter Flight Data**						
LO	Calculate the time to climb to cruise altitude			x	x		
LO	Calculate vertical and horizontal obstacle clearances			x	x		
LO	Calculate the surface level for elevated heliports and Helidecks			x	x		
034 04 03 00	**Cruise**						
034 04 03 01	**Cruise Techniques**						
LO	Explain the cruise procedures for “maximum endurance” and “maximum range”			x	x		
034 04 03 02	**Maximum Endurance**						
LO	Explain fuel flow in relation to TAS against power available and power required			x	x		
LO	Calculate the speed for maximum endurance			x	x		
034 04 03 03	**Maximum Range**						
LO	Define the term maximum range			x	x		

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Calculate the speed for maximum range			x	x		
034 04 03 04	**Maximum Cruise**						
LO	Define the term maximum cruise			x	x		
LO	Calculate the speed for maximum cruise			x	x		
034 04 03 05	**Influence of Variables on Cruise Performance**						
LO	Explain the effect of altitude on range and endurance			x	x		
LO	Explain the effect of meteorological variables on range and endurance			x	x		
LO	Explain the effect of mass variables on range and endurance			x	x		
034 04 03 06	**Cruise altitudes**						
LO	Define the term optimum altitude (Economical Cruise Altitude)			x	x		
LO	Explain the factors which affect the choice of economical cruise altitude			x	x		
LO	Explain the term maximum altitude			x	x		
LO	Explain the factors which might affect or limit the maximum operating altitude			x	x		
LO	Calculate the economical fuel consumption for flight at economical cruise altitudes			x	x		
LO	Understand the relation between economical fuel consumption, economical cruise speed and economical altitude			x	x		
034 04 03 07	**Use of Helicopter Flight Data**						

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Determine from the helicopter performance data sheets with all engines operating the power settings and speeds for: - Maximum range - Maximum endurance - Normal cruise and maximum speed			x	x		
LO	Determine the fuel consumption from the helicopter performance data sheets in accordance to altitude and helicopter mass.			x	x		
LO	Determine the fuel consumption from the helicopter performance data sheets for holding, approach and transit to an alternate in special conditions or IFR conditions following an engine failure			x	x		
034 04 04 00	**En-route One Engine Inoperative**						
LO	Describe how helicopter performance is affected by the critical power unit being inoperative when en-route			x	x		
LO	State the descent flight path clearances when not visual with the surface			x	x		
LO	State the flight path clearance required in the descent when visual with the surface			x	x		
LO	Explain the drift-down procedure in accordance to JAR-OPS 3.500			x	x		
LO	Determine minimum obstacle clearance height prescribed in JAR-OPS 3.250 and 3.500			x	x		
LO	State the reduction in flight path width when navigational accuracy can be achieved			x	x		
034 04 04 01	**Influence of Variables on En-route One Engine Inoperative Performance**						
LO	Identify factors which affect the en-route net flight path			x	x		
034 04 04 02	**Use of Helicopter Flight Data**						
LO	Find the single engine service ceiling, range and endurance given engine inoperative charts			x	x		

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Find the maximum continuous power settings given engine inoperative charts			x	x		
LO	Find the amount of fuel to jettison to reduce helicopter mass			x	x		
034 04 05 00	**Descent**						
034 04 05 01	**Descent Techniques**						
LO	Explain the effect of descending with constant IAS			x	x		
LO	Explain the following limiting speeds for descent: - Maximum operating speed V_{MO} - Never exceed speed V_{NE}			x	x		
034 04 05 02	**Influence of Variables on Descent Performance**						
LO	Explain the influence of mass and configuration on rate of descent and glide angle			x	x		
LO	Explain the influence of altitude and meteorological conditions on rate of descent and glide angle			x	x		
034 04 05 03	**Use of Helicopter Flight Data**						
LO	Determine from the helicopter performance data sheets the information for the all engines operating and one engine inoperative: - Descent rates - Time and distance for descent - Fuel used during descent			x	x		
034 04 06 00	**Approach and Landing**						
034 04 06 01	**Approach requirements**						
LO	Describe the requirements for the approach climb			x	x		

CHAPTER 19: DETAILED THEORETICAL KNOWLEDGE SYLLABUS AND LEARNING OBJECTIVES
Subject – 034 – Performance Aeroplane
See Appendix 1 to JAR-FCL 1.470 and JAR-FCL 2.470

Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Describe the requirements for the landing climb			x	x		
LO	Explain the effect of temperature and pressure altitude on approach and landing climb performance			x	x		
034 04 06 02	**Definitions of Terms used**						
LO	Define Landing Distance Available (LDA)			x	x		
LO	Define Landing Distance Required (LDR)			x	x		
LO	Define Landing Decision Point (LDP) for: - Landing on non-elevated heliport - Landing on elevated heliports/helidecks			x	x		
034 04 06 03	**Approach and Landing Procedures**						
LO	Explain the procedure for critical power unit failure prior to and after landing decision point			x	x		
LO	Explain that the portion of flight after landing decision point must be carried out visually			x	x		
LO	Explain the procedures for landing on different heliports/Helidecks: - Landing with HIGE or HOGE - Obstacle clearances both lateral and vertical - Landing on non-elevated heliports - Landing on elevated heliports or helidecks			x	x		
034 04 06 04	**Influence of Variables on Landing Performance**						

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Syllabus Reference	**Syllabus and Learning Objectives**	*Aeroplane*		*Helicopter*			*IR*
		ATPL	CPL	ATPL /IR	ATPL	CPL	
LO	Calculate the affects of the following for the landing: - Altitude of the heliport - Temperature - Landing technique to be used - Wind - Landing mass			x	x		
034 04 06 05	**Use of Helicopter Flight Data**						
LO	Determine from the helicopter performance data sheets the landing distance required for a given landing mass			x	x		
LO	Determine from the helicopter performance data sheets the landing and approach climb limited landing mass			x	x		
LO	Find the landing decision point (LDP) for certain conditions			x	x		
LO	Find the landing distance required (LDR) for certain conditions			x	x		

END