M91 Aviation and space insurance 2021

Chartered Insurance Institute
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Learning Outcome		Assessment Criteria		Indicative Content	
1 **4** **Questions**	**Know the main elements of aviation risk.**	**1.1**	Describe the key principles concerning how an aircraft flies.	**1.1.1**	The forces of lift, drag and thrust.
				1.1.2	The three axes covering roll, pitch and yaw.
				1.1.3	Forms of propulsion.
				1.1.4	Aircraft design and materials.
		1.2	Explain the types of aviation risk.	**1.2.1**	Main causes of aircraft accidents, including human failure, mechanical failure, communication and navigation failure, hijacking, terrorism and war risks and cyber risks.
				1.2.2	Risk frequency and severity in relation to aviation.
				1.2.3	Importance of analysing data and statistics.
		1.3	Describe measures taken to prevent and reduce aviation accidents.	**1.3.1**	Ground Proximity Warning System (GPWS) and Enhanced and Ground Proximity Warning System (EGPWS).
				1.3.2	Airborne Collision and Avoidance System (ACAS).
				1.3.3	Aircraft safety certification, compliance and training.
				1.3.4	Crew resource management (CRM).
				1.3.5	Use of simulators.
				1.3.6	Safety Management Systems (SMS).
				1.3.7	Cyber risks.
				1.3.8	ETOPS.
				1.3.9	Aeronautical Operational Control (AOC).
				1.3.10	Aircraft operating manual.
				1.3.11	Pilot classification.
		1.4	Describe key developments in global air navigation.	**1.4.1**	The future applications of satellite technology.
				1.4.2	Developments in communication, surveillance and identification.
				1.4.3	Cyber risks on aircraft operations, malicious and non malicious.

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2 **9 Questions**	**Understand the main international and national measures impacting on aviation risk.**	**2.1**	Explain the purpose and main features of international conventions.	**2.1.1**	The main features of the Warsaw Convention 1929 and Hague Protocol 1955.
				2.1.2	Montreal Convention 1999 and EU Regulation 2027/97 & 889/2002.
				2.1.3	Rome Convention 1952.
				2.1.4	Guadalajara Convention 1961.
				2.1.5	Main provisions of the Chicago Convention.
				2.1.6	Tokyo Convention 1963.
				2.1.7	Hague Convention 1970.
				2.1.8	Montreal Convention 1971.
				2.1.9	2010 Beijing Convention and 2010 Beijing Protocol and 2014 Montreal Protocol.
		2.2	Explain the purpose and main features of key global aviation organisations.	**2.2.1**	Overview of the International Civil Aviation Organisation (ICAO).
				2.2.2	Overview of the International Air Transport Association (IATA).
				2.2.3	Airline code sharing and other intercarrier agreements.
		2.3	Explain the purpose and main features of key European aviation organisations.	**2.3.1**	Overview of Civil Aviation Authority (CAA) and European Aviation Safety Agency (EASA).
				2.3.2	The minimum levels of insurance; EU directive 785/2004 and 285/2010.
				2.3.3	The calculation of damages in the UK and the EU.
		2.4	Explain the main aircraft legislation in the UK, EU and the US.	**2.4.1**	Overview of the Civil Aviation Act 1982 and Air Navigation Order 2016.
				2.4.2	Overview of the main features of the US legal system, jurisdiction and the litigation process.
				2.4.3	Overview of compensatory and punitive damages in the US.
				2.4.4	The main provisions of the General Aviation Revitalization Act (GARA).
				2.4.5	The main functions of the Federal Aviation Administration (FAA).

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3 **11** **Questions**	**Understand the scope of cover under the main and related classes of aviation insurance.**	**3.1**	Understand the scope of the core aviation insurance cover.	**3.1.1**	Overview of London Aircraft Insurance Policy AVN 1D **AVN1C**.
				3.1.2	Overview of section one of Aviation Products Grounding and other aviation liabilities insurance AVN 98.
				3.1.3	Overview of airport owners' and operators' liability policy including ARIEL and AVN98.
				3.1.4	Overview of War, Hijacking and Other Perils Exclusion Clause (Aviation) – AVN 48B.
				3.1.5	Extended Coverage Endorsement (Aircraft (Aircraft Hulls) –AVN 51.
				3.1.6	Extended Coverage Endorsement (Aircraft Liabilities) – AVN52E & Extended Coverage Endorsement (Aviation Liabilities) – AVN52G.
				3.1.7	LSW 555D Aviation Hull 'War and Allied Perils' 'Policy.
		3.2	Describe the scope of additional aviation insurance cover.	**3.2.1**	Overview of specific airline insurance requirements and typical coverage.
				3.2.2	Overview of typical personal accident coverage and exclusions.
				3.2.3	Passenger Voluntary Settlement Endorsement–AVN34A.
				3.2.4	Overview of typical loss of use and consequential loss policy coverage and exclusions.
				3.2.5	Overview of typical loss of licence policy coverage and exclusions.
				3.2.6	Overview of typical cargo liability and all risks cover and exclusions.
				3.2.7	Overview of typical hull deductible insurance coverage and exclusions.
				3.2.8	Overview of typical spares all risks insurance coverage and exclusions.

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4 **6 Questions**	**Understand the market practices of aviation insurance.**	**4.1**	Examine the application of endorsements and clauses.	**4.1.1**	AVN5A & AVN6A; AVN 8 & AVN9; AVN17A, AVN18A & AVN19A; AVN21, AVN25 & AVN41; AVN26; AVN71 & AVN38B; AVN46B; AVN54; AVN59; AVN60; AVN61; AVN62 & AVN76; AVN111**.**
		4.2	Describe typical deductible amounts.	**4.2.1**	Hull deductibles.
				4.2.2	Spares deductibles.
				4.2.3	Liability deductibles.
		4.3	Analyse how the insurance market responds to bank/leasing agreements and contractual requirements.	**4.3.1**	Airline finance/Lease Contract Endorsement– AVN67C & Finance/Lease Continuing Liability Endorsement-AVN99.
				4.3.2	Aircraft financial interest endorsement AVN28B.
		4.4	Analyse how aviation insurance responds to airline and service provider agreements and contractual arrangements.	**4.4.1**	Overview of aviation insurance responds to airline and service provider agreements.
				4.4.2	Overview of contractual arrangements including ground handling, code sharing and interline agreements.
		4.5	Explain the marketing of aviation risks.	**4.5.1**	Overview of global providers of aviation insurance.
				4.5.2	Overview of the subscription market and the verticalisation of the placing.

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5 **9 Questions**	**Understand risk assessment and underwriting of aviation insurance.**	**5.1**	Explain the factors to be considered by an aviation underwriter when assessing risks.	**5.1.1**	Overview of the generic factors to be considered by an aviation underwriter when selecting which risks to underwrite.
				5.1.2	Overview of the segment specific factors to be considered by an aviation underwriter when selecting which risks to underwrite.
		5.2	Examine different rating factors and methods of rating for the main classes of aviation insurance and their application.	**5.2.1**	Overview of the different rating factors and methods of rating for Hull. Aircraft Liability, Product and Airport Liability insurance and their application.
				5.2.2	Overview of the different rating factors and methods of rating for the different types of aircraft operators.
				5.2.3	Overview of the different rating factors and methods of rating for risks with an increased exposure.
				5.2.4	Overview of the different rating factors for Drones/UAVS.
		5.3	Explain the use of key underwriting tools.	**5.3.1**	Overview of warranties, excesses, deductibles, franchises and self-insured retention (SIR).
				5.3.2	Overview of profit commissions and no claims bonuses.
		5.4	Examine key account management considerations for the underwriter.	**5.4.1**	Terms of trade.
				5.4.2	Fluctuations in currency conversion.
				5.4.3	Reserving.
		5.5	Describe the various types of captive and mutual insurance potentially available to the aviation industry.	**5.5.1**	Pure captive.
				5.5.2	Association and group captives.
				5.5.3	Mutual structures.
				5.5.4	Protected cell type companies.
		5.6	Explain the forms of reinsurance that is used in aviation unwriting.	**5.6.1**	Facultative reinsurance.
				5.6.2	Quota-share or surplus reinsurance.
				5.6.3	Excess of loss (XL) reinsurance.
				5.6.4	Risk Excess reinsurance.

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6 **7** **Questions**	**Understand claims investigation, handling and settlement procedures in aviation insurance.**	**6.1**	Examine the claims process for hull and spares claims.	**6.1.1**	Investigation.
				6.1.2	The role and responsibilities of surveyors.
				6.1.3	Application of the insurance policy.
				6.1.4	Settlement.
		6.2	Examine the claims process for liability claims.	**6.2.1**	Investigation/information required.
				6.2.2	Settlements in the UK, USA/ Canada and other jurisdictions.
				6.2.3	Prosecution of claim.
				6.2.4	Passenger and baggage claims.
				6.2.5	Mail, cargo, third party.
				6.2.6	Product liability claims.
		6.3	Describe the role of the UK and US accident investigation agencies and related EU regulations.	**6.3.1**	UK Air Accidents Investigation Branch (AAIB).
				6.3.2	US National Transportation Safety Board (NTSB).
				6.3.3	Air Accidents Investigation: EU Regulation 996/2010.
7 **4** **Questions**	**Understand key aspects of space insurance.**	**7.1**	Describe the commercial space industry and the UN regulations which govern the use of space.	**7.1.1**	Summary of the space industry.
				7.1.2	International space legislation / UN regulations.
		7.2	Explain satellite technology and its uses.	**7.2.1**	Overview of satellites and their applications.
				7.2.2	Overview of orbits used by satellites.
				7.2.3	Overview of launch vehicles and the launch service.
		7.3	Examine types of cover available.	**7.3.1**	Pre-Launch.
				7.3.2	Launch and in-orbit.
				7.3.3	In-orbit.
				7.3.4	Third Party Liability.
				7.3.5	Space tourism.
		7.4	Examine the factors affecting the underwriting of space and satellite insurances.	**7.4.1**	Technical Risk factors.
				7.4.2	Additional Considerations; Accumulation on launch; realistic disaster scenarios; market cycles.
				7.4.3	Satellite market specific factors.
		7.5	Examine claims handling and procedures for space insurance.	**7.5.1**	Complexity of negotiation.
				7.5.2	Claims coordination committee.
				7.5.3	Settlement considerations.