

Name: Enrolment No:			
UPES End Semester Examination, December 2025			
Course: Aviation Air & Space Law Program: BTech LLB CSE Cyber Law Course Code: CLCC6004		Semester: XI Time : 03 hrs. Max. Marks: 100	
Instructions: Attempt all questions.			
SECTION A (5Qx2M=10Marks)			
S. No.		Marks	CO
Q 1	Define “space object” as per the Registration Convention, 1975.	2	CO1
Q 2	Define “Air Law”.	2	CO1
Q 3	State the importance of the Outer Space Treaty 1967?	2	CO1
Q 4	What is the full form of DGCA?	2	CO1
Q 5	Define “state aircraft”.	2	CO1
SECTION B (4Qx5M= 20 Marks)			
Q 6	Describe the key functions of ICAO in ensuring global civil aviation safety?	5	CO2
Q 7	Discuss the meaning of “space debris” and its legal concern.	5	CO2
Q 8	Briefly explain the role of national authorization and continuing supervision under Article VI of the Outer Space Treaty.	5	CO2
Q 9	Analyze the legal requirements for aircraft operations, maintenance, and licensing under the Bharatiya Vayuyan Adiniyam, 2024. How has the Act modernized India’s aviation regulatory framework?	5	CO2
SECTION-C (2Qx10M=20 Marks)			
Q 10	Evaluate the concept of “harmful interference” under Article IX of the Outer Space Treaty. In what situations might a State be required to undertake consultations, and what are the legal implications of failing to do so?	10	CO3
Q 11	Discuss the role and powers of the Directorate General of Civil Aviation (DGCA) in India. How do these powers ensure aviation safety, and what challenges arise in regulating new technologies like e-VTOLs and drones?	10	CO3

SECTION-D (2Qx25M=50 Marks)			
Q 12	In 2032, <i>AuroraSat-3</i>, an Earth-observation satellite owned and operated by Cosmica AG, a private company incorporated in State A, malfunctioned during an orbital maneuver. The satellite's thrusters fired unexpectedly due to a software fault, altering its trajectory and placing it on a collision course with <i>Zenith-2</i>, a telecommunications satellite owned by State B's national space agency. Although State A's space agency had authorized the launch and licensed Cosmica AG's operations, it later emerged that Cosmica AG failed to install a required software patch meant to correct the malfunctioning thruster algorithm—a patch mandated by State A's domestic regulations. Six days later, <i>AuroraSat-3</i> collided with <i>Zenith-2</i> in low-Earth orbit (LEO), resulting in the complete destruction of both satellites and generating a significant debris cloud. Some fragments re-entered the atmosphere and struck a coastal town in State C, damaging several buildings and injuring three civilians. State C incurred substantial emergency-response costs and is considering an international claim. State A acknowledges it is a “launching State” for <i>AuroraSat-3</i> but argues that Cosmica AG's negligence should reduce or eliminate State A's liability. State B claims that State A is absolutely liable for the loss of <i>Zenith-2</i> and refuses to negotiate until State A accepts full responsibility. Meanwhile, Cosmica AG publicly asserts that the collision was partially due to State B's outdated collision-avoidance system. State C is preparing a diplomatic note asking whether it can claim compensation for both the physical damage on its territory and the medical treatment of injured civilians. Questions Under the 1972 Liability Convention, analyze which State(s) may be held internationally liable for the destruction of <i>Zenith-2</i> and for the damage caused on the surface of State C. In your answer, address: (a) Identification of all relevant launching States (10 Marks) (b) The distinction between absolute liability and fault-based liability (10 Marks) (c) Whether Cosmica AG's negligence affects the international liability of its State (5 Marks)	25	CO4

Q 13	In 2035, State X, an emerging spacefaring nation, has recently expanded its commercial launch sector. A private company incorporated in State X, Orbita Dynamics Ltd., launched a constellation of six small satellites known as the OD-Track series. The launch was conducted from the Azura Spaceport, which is located on the sovereign territory of State Y, pursuant to a bilateral agreement allowing State X’s companies to use State Y’s facilities. Under the agreement, State Y provides launch services and retains technical control of the launch vehicle until payload deployment. After deployment, operational control transfers directly to Orbita Dynamics in State X. Following the launch, neither State X nor State Y submitted any registration information to the United Nations. The two States each assume the other has primary responsibility for registering the OD-Track satellites. As a result, the satellites were never officially entered into the UN Register of Objects Launched into Outer Space. Months later, one of the OD-Track satellites malfunctioned and drifted into the operational orbit of StarLinka-5, a satellite owned and operated by the national space agency of State Z. A near-collision occurred, forcing State Z to conduct emergency collision-avoidance maneuvers, causing fuel depletion and temporary service disruption. State Z demanded information regarding the malfunctioning satellite’s orbital parameters and ownership. State X responded that it could not provide full data because Orbita Dynamics considered much of its satellite design and operations data to be commercially confidential. State Y refused involvement, stating it merely offered launch services and bore no further responsibility. State Z is now preparing a diplomatic protest, arguing that the failure of registration caused uncertainty about the satellite’s status, operator, orbital location, and point of contact—creating unnecessary risk to space safety. Questions Under the Registration Convention, analyze which State(s) bear(s) the obligation to register the OD-Track satellites and what specific registration information must be submitted to the United Nations. In your answer, address: (a) The criteria for identifying the “State of registry” (10 Marks) (b) Whether multiple launching States may determine among themselves who registers (10 Marks) (c) Whether commercial confidentiality can justify withholding orbital or functional data (5 Marks)	25	CO4
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