

**Centre for Aerospace & Defence Laws (CADL)
DIRECTORATE OF DISTANCE EDUCATION
NALSAR UNIVERSITY OF LAW, HYDERABAD**

M.A. (AVIATION LAW & AIR TRANSPORT MANAGEMENT)

Academic Year: 2022-2023

Third Semester - End Semester Examination (January, 2023)

Paper II – 2.3.8. Air Space & Air Traffic Management

Duration of the Examination: 2 ½ hours

Total Marks : 70 marks

INSTRUCTIONS TO CANDIDATES

- a) Read the instructions carefully and adhere to the same.
 - b) Please mention your DDE ID No., date of the exam, name of the programme & subject on the Answer Sheet and the Additional Answer Sheets, if any.
 - c) The questions to be interpreted as given and no clarification can be sought from the Invigilator.
 - d) Clearly indicate the question numbers while answering them. Answers without question numbers / wrong question numbers will not be evaluated.
 - e) Write the answers clearly and neatly. Answers in illegible handwriting will not be taken into consideration.
 - f) Candidates are prohibited to carry phones or any other electronic devices, books, material etc. in the Examination Hall.
 - g) Copying is strictly prohibited and is considered as a serious academic misconduct and the University will take action as it deems fit.
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Section – A

**Answer FIVE questions out of SEVEN questions and each question carries 10 marks.
(5 x 10 marks = 50 marks)**

- 1. Answer the following:
 - a) What do you understand by FANS? Briefly explain the historical development of FANS.
 - b) *AAI has monopoly over the provisions of ANS.* Do you think that time has come for private participation? Discuss.

2. Discuss the following:
 - a) Establish the rationale for developing a global integrated Air Traffic Management System. Explain the basic concepts of Communications, Navigation and Surveillance systems.
 - b) Explain what do you understand by Required Communication Performance (RCP), Required Navigation Performance (RNP) and Required Surveillance Performance (RSP). Discuss how do these relate to the new Global CNS/ATM System?
3. Write on the following:
 - a) What are the salient features of Article 3 of the ICAO Convention? Explain.
 - b) Discuss the Perspective of Civil-military interoperability and Flexi use of airspace.
4. Answer the following:
 - a) Discuss the developments in Global Navigation Satellite System. Distinguish between Ground-Based, Aircraft-Based and Satellite-Based Satellite System.
 - b) Enumerate the essential precepts in implementation and operation of new Global CNS/ATM System. Explain the significance of any two of them.
5. "In order to ensure that the limited usable airspace is effectively and efficiently utilized by civil aircraft for their safe, orderly and economic operations, it is essential that an efficient airspace management is available on a global basis." Do you agree with this statement? Give reasons. In the light of the given statement critically examine and comment on the concept of 'Airspace' in terms of its vertical and lateral limits and the different forms of Air Traffic services.
6. "Failure to consider human performance capabilities and limitations from the very beginning of concept definition can lead to inappropriate design and serious compromises in system productivity and even safety." Do you agree with this statement? In the light of the given statement, critically examine the concept of Air Traffic Control Operations and its significance in effective management of Airspace.
7. "International Conventions clearly attribute liability for effective management of the Airspace on the states". Do you agree with this statement? Give reasons. In the light of the given statement, critically examine the concept of state liability for effective management of air space with a special focus on the changes in this position with emergence of private players in this segment.

Section – B

Answer FOUR questions out of SIX questions and each question carries 05 marks. (4 x 5 marks = 20 marks)

- A.** Aerodrome Warnings.
- B.** Role of DGCA in Air Space management in India.
- C.** ICAO Annexes and Air Space Management.
- D.** Automatic Dependent Surveillance (ADS)
- E.** Flight Information Regions (FIRs) and Global Air Space Management.
- F.** GBAS and GAGAN.