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 **PRESIDENCY UNIVERSITY**

  **Bengaluru**

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| **End - Term Examinations – JANUARY 2025** |
| **Date:** 11 -- 01- 2025 **Time:** 01:00 pm – 04:00 pm |

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| **School:** SOM-UG | **Program:** BBA Aviation Management |
| **Course Code:** BAV3023 | **Course Name:** Air Traffic Control |
| **Semester**: III | **Max Marks**:100 | **Weightage**:50% |

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| **CO - Levels** | **CO1** | **CO2** | **CO3** | **CO4** | **CO5** |
| **Marks** | **20** | **11** |  **28** | **24** | **17** |

**Instructions:**

1. *Read all questions carefully and answer accordingly.*
2. *Do not write anything on the question paper other than roll number.*

**Part A**

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| **Answer ALL the Questions. Each question carries 2 marks. (10Q x 2M = 20M)** | **Bloom's Level**  | **CO** |

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| **1** | What information does a flight progress strip typically contain | **2 Marks** | Remember | **CO3** |
| **2** | Name two responsibilities of a ground controller | **2 Marks** | Remember | **CO4** |
| **3** | Which is NOT typically included in a clearance? | **2 Marks** | Remember | **CO3** |
| **4** | Name two types of ATC facilities.  | **2 Marks** | Remember | **CO1** |
| **5** | What is the role of a flight data processor in an ATC system?  | **2 Marks** | Remember | **CO1** |
| **6** | What should a pilot do if they encounter unexpected severe turbulence?  | **2 Marks** | Remember | **CO3** |
| **7** | What does NextGen primarily replace? | **2 Marks**  | Remember | **CO5** |
| **8** | List two primary functions of an Air Traffic Control (ATC) system.  | **2 Marks** | Remember | **CO1** |
| **9** | What is the main purpose of a radar system in ATC? | **2 Marks** | Remember | **CO2** |
| **10** | Define "separation" in the context of ATC. | **2 Marks** | Remember | **CO2** |

**Part B**

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| **Answer ALL the Questions. Each question carries 7 marks. (5Q x 7M = 35M)** | **Bloom's Level**  | **CO** |
| **11** |  | Explain the main components of a typical ATC system and explain how they work together to ensure safe and efficient air traffic management.  | **7 Marks** | **Understand** | **CO1** |
|  | **Or** |  |
| **12** |  | Evaluate the importance of radar systems in modern ATC. Discuss the advantages and limitations of primary and secondary radar systems, and explain how they complement each other. | **7 Marks** | **Evaluate** | **CO1** |

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| **13** |  | Explain the concept of airspace classification and how it affects ATC procedures. Provide examples of different airspace classes and their characteristics.  | **7 Marks** | **Understand** | **CO3** |
|  | **Or** |  |
| **14** |  | Compare and contrast the roles and responsibilities of tower controllers, approach controllers, and enroute controllers. How do their functions differ, and how do they collaborate to ensure seamless air traffic flow?  | **7 Marks** | **Analyze** | **CO3** |

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| **15** |  | List at least four sources of information about the weather that the ATC gets.  | **7 Marks** | **Remember** | **CO1** |
|  | **Or** |  |
| **16** |  | Evaluate the role of automation in modern ATC systems. Discuss the benefits and potential challenges of increased automation, and explain how it affects the controller's role.  | **7 Marks** | **Evaluate** | **CO1** |

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| **17** |  | Identify the process of handling an aircraft from takeoff to landing, including the transfer of control between different ATC facilities. Explain the key procedures and coordination required at each stage.  | **7 Marks** | **Understand** | **CO2** |
|  | **Or** |  |
| **18** |  | Explain the functioning of the TACC (Terminal Airspace Control Center) and the equipment used for its functioning  | **7 Marks** | **Understand** | **CO2** |

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| **19** |  | Describe altitude assignment in ATC. Include its types and the factors influencing these assignments. | **7 Marks** | **Understand** | **CO4** |
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| **20** |  | Discuss the elements of departure instructions and the role of Standard Instrument Departures (SIDs) in simplifying these instructions. | **7 Marks** | **Understand** | **CO4** |

**Part C**

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| **Answer Any THREE Questions. Each question carries 15 marks. (3Q x 15M = 45M)** | **Bloom's Level**  | **CO** |

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| **21** | Explain the required reports in ATC. Why are these reports crucial, and how should ATC handle a situation where a report is missed? | **15 Marks** | **Understand** | **CO5** |
| **22** | Evaluate the impact of weather conditions on ATC operations. Discuss how controllers adapt their procedures during adverse weather and role of weather information system in ATC decision making. | **15 Marks** | **Evaluate** | **CO1** |
| **23** | Explain holding instructions and their elements. Analyze a situation where multiple aircraft need holding patterns during airport closure. | **15 Marks** | **Understand** | **CO4** |
| **24** | Analyse the significance of route planning in ATC? Explain the factors influencing route selection and describe a scenario where a route needs mid-flight modification. | **15 Marks** | **Analyse** | **CO3** |