**UPES**
**End Semester Examination, December 2023**

Course: Airport Functions of Airlines        Semester: III
Program: BBA AVO        Time: 03 hrs.
Course Code: TRAV2001        Max. Marks: 100
Instructions:
- *Read each question carefully before answering.*
- *Make sure your answers are concise and to the point.*
- *Support your answers with specific examples or details from the case study where appropriate.*
- *Write your answers legibly.*
- *Section – A and B are compulsory i.e., there will be no choice available for these sections.*
- *Attempt any 3 from Section – C and any 2 from section – D*

**SECTION A**
**10Qx2M=20Marks**

| S. No. | Statement of the Question | Marks | CO |
|---|---|---|---|
| Q1. | Define the term 'regulatory framework' in the context of the aviation industry. | 2 | CO1 |
| Q2. | Name one principal regulation governing aviation in India. | 2 | CO1 |
| Q3. | List two types of amenities offered at Indira Gandhi International Airport. | 2 | CO1 |
| Q4. | What is the primary function of the International Civil Aviation Organization (ICAO)? | 2 | CO1 |
| Q5. | Write some of the responsibilities of the European Union Aviation Safety Agency (EASA)? | 2 | CO1 |
| Q6. | Write some of the specialized facilities at an airport. | 2 | CO1 |
| Q7. | What does a runway code number represent? | 2 | CO1 |
| Q8. | Identify the key stakeholder in the ownership of Jolly Grant Airport. | 2 | CO1 |
| Q9. | Frequent flyer programs offered by airlines primarily aim to: a) Reduce operational costs b) Enhance customer loyalty c) Increase baggage allowance d) Streamline security processes | 2 | CO1 |
| Q10. | Airport lounges for business and first-class passengers are maintained by: a) The airport authority b) Individual airlines c) Third-party service providers d) Government agencies | 2 | CO1 |

**SECTION B**
**4Qx5M= 20 Marks**

| Q11. | Describe the check-in and boarding processes at airports. | 5 | CO2 |
|---|---|---|---|
| Q12. | How do airports contribute to the economic development of a region? | 5 | CO2 |
| Q13. | What are the critical factors in designing airport infrastructure? | 5 | CO2 |
| Q14. | How do international regulations affect airline operations at airports? | 5 | CO2 |

| | SECTION-C<br>3Qx10M=30 Marks | | |
|---|---|---|---|
| Q15. | Discuss the complexities of airline operations at major airports. | **10** | **CO3** |
| Q16. | Describe the architectural style of Jolly Grant Airport. | **10** | **CO3** |
| Q17. | Explain the role of airports in the national economy, citing specific examples. | **10** | **CO3** |
| Q18. | Explain the check-in and boarding processes at airports, highlighting the role of technology in enhancing these operations. | **10** | **CO3** |
| | SECTION-D<br>2Qx15M= 30 Marks | | |
| | Heathrow Airport, recognized as one of the busiest in the world, grappled with substantial operational challenges stemming from its immense passenger traffic and limited runway capacity. The airport, operating two main runways, handled a diverse mix of flights—domestic, European, and long-haul—often operating at near-full capacity. The summer of 2019 brought heightened challenges as an influx of holiday travelers, coupled with rigid slot allocation rules, led to significant scheduling issues. This resulted in widespread flight delays, setting off a ripple effect that strained the airport's operations. Further complicating matters, Heathrow faced hurdles in efficiently managing its check-in and boarding processes to cope with the surge in passenger volume.<br><br>In response to these challenges, Heathrow Airport embarked on a path of innovative solutions. It rolled out an advanced slot allocation system, leveraging real-time data analytics to streamline flight schedules and mitigate delays. To further enhance passenger experience, the airport introduced fully automated check-in kiosks and biometric boarding gates, aiming to expedite the check-in process and diminish queue times significantly. Another key initiative was the implementation of AI-driven algorithms for dynamic resource allocation, enabling the airport to optimally deploy staff and baggage handling resources in alignment with real-time flight and passenger data.<br><br>The impact of these innovations was profound. The advanced slot management system played a crucial role in significantly curtailing flight delays, thereby enhancing on-time performance. The shift towards automated check-in and boarding not only bolstered passenger satisfaction but also accelerated throughput at security checkpoints. Moreover, the dynamic allocation of resources led to a more efficient use of airport amenities, thereby reducing operational costs and boosting overall efficiency. These outcomes marked a significant step in Heathrow's ongoing efforts to optimize operations and enhance passenger experience amidst the ever-evolving challenges of modern air travel. | | |
| Q 19. | Analyze the effectiveness of Heathrow Airport's advanced slot allocation system in managing high air traffic volumes and minimizing delays. | **15** | **CO4** |

| Q 20. | Evaluate the impact of automated check-in and biometric boarding on passenger experience at Heathrow Airport. What challenges did the airport face in implementing these technologies, and how were they overcome? | **15** | **CO4** |
|---|---|---|---|
| | Delta Air Lines recently implemented biometric boarding using facial recognition at major airports like Hartsfield-Jackson Atlanta International Airport. This initiative, in collaboration with U.S. Customs and Border Protection and the TSA, allows passengers to enroll via Delta's app, kiosks, or at the airport, and streamlines the boarding process for international flights. The system enhances boarding efficiency and security, offering a contactless experience. However, it raises challenges such as privacy concerns and potential system inaccuracies. Delta addresses these by ensuring data transparency and providing alternative boarding methods. The overall impact on passenger experience has been positive, noted for its convenience and speed. | | |
| Q 21. | Conduct a critical analysis of a recent technological innovation in the check-in and boarding process of a leading airline. Discuss its implementation, advantages, challenges, and its impact on passenger experience. | **30** | **CO4** |