

ADMISSION NUMBER											

School of Business

Master of Business Administration MBA Dual Specialization
Mid Term Examination - Mar 2024

Duration : 90 Minutes
Max Marks : 50

Sem IV - MBAV6025 - Aviation Environment

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) Explain the complexities surrounding the integration of sustainable aviation fuels into existing infrastructure and supply chains, logistical challenges and economic feasibility. K5 (5)
- 2) Design an environmental impact assessment framework for evaluating the potential ecological effects of expanding an airport's runway. K3 (6)
- 3) How might the integration of AI and machine learning technologies influence decision-making processes during a critical weather event that disrupts aviation operations like a severe thunderstorm or hurricane? K4 (8)
- 4) (i) Assess the practicality and effectiveness of adopting carbon offsetting programs to attain carbon neutrality within the aviation industry considering real-world scenarios and challenges. (5 Marks)
(ii) Develop a strategic plan outlining the steps necessary for successful implementation on (a) stakeholder engagement, (b) financial considerations, (c) scalability and (d) potential obstacles to overcome. (4 Marks) K3 (9)

- 5) Fuel-efficient aircraft designs and engine technological advancements have made significant strides in reducing aviation fuel consumption, thereby mitigating the industry's environmental impact. These innovations, characterized by advanced aerodynamics, lightweight materials, and improved engine efficiency, have led to substantial improvements in operational efficiency and environmental performance. Studies indicate that newer aircraft models consume up to 25% less fuel per passenger-kilometer compared to older counterparts, while next-generation engine technologies promise even greater gains in fuel efficiency and emissions reduction. Through collaboration and compliance with initiatives like CORSIA, the aviation industry is taking coordinated steps towards a more sustainable future, demonstrating its commitment to reducing the environmental consequences of aviation fuel consumption on a global scale.
- Q (i) Determine to what extent have fuel-efficient aircraft designs and engine technological advancements contributed to reducing aviation fuel consumption (5 Marks)
- Q (ii) How do international agreements and CORSIA global initiatives facilitate coordinated efforts to address the environmental consequences of aviation fuel consumption on a global scale? (5 Marks)
- 6) In today's global context, sustainability has become a pressing concern across industries, including aviation. Airport operations, in particular, have a significant environmental impact, encompassing energy consumption, waste generation, and emissions. To address this, airports must engage their staff across various departments to raise awareness about environmental issues and promote sustainable practices. Developing a comprehensive communication strategy and defining key performance indicators (KPIs) are essential steps to ensure the effectiveness of environmental awareness campaigns among airport employees.
- Q (i) What are the potential barriers or challenges to effective communication and engagement with airport staff regarding environmental impact and sustainability initiatives, and how can these obstacles be addressed? (6 marks).
- Q (ii) What methods can be used to honour and commend employees having a strong commitment to sustainability principles and make a major contribution to lowering the environmental effect of airport operations? (6 marks).