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School of Business

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

Duration : 90 Minutes
Max Marks : 50

Sem IV - MSB23T2006 - Air Traffic and Ramp Operations

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 recent trends in crew resource management to reduce human error in decision making. K5 (5)
- 2) Identify the factors under which an ATC will instructed to reroute the scheduled flight path of an aircraft. K3 (6)
- 3) Analyze potential implications for air traffic control operations, considering factors such as weather conditions, pilot experience, aircraft instrumentation, and communication protocols. K4 (8)
- 4) Case Study: K3 (9)
Bengaluru Airport introduced the Computer Tomography X-ray (CTX) machine. By this passengers will no longer need to remove personal electronic devices from handbags during pre-embarkation security checks. This led to enhance security measures while improving operational efficiency. The integration of the CTX machine with the Automatic Tray Retrieval System (ATRS) and full-body scanners aims to streamline the screening process, eliminating the need for patting down passengers after the primary screening through walk-through metal detectors. As Bengaluru airport leads the way questions arise regarding its effectiveness, passenger experience, and potential challenges in its implementation.
Questions:
 1. How effective is the integration of the Computer Tomography X-ray (CTX) machine with the Automatic Tray Retrieval System (ATRS) and full-body scanners in streamlining the security screening process? (3marks)
 2. What are the potential benefits and drawbacks of eliminating the current practice of patting down passengers after the primary screening through walk-through metal detectors? (3marks)
 3. What lessons can other airports learn from KIA's initiative in upgrading security infrastructure to enhance passenger convenience and transit efficiency? (3marks)
- 5) In a busy air traffic control facility, an air traffic controller finds herself relying on various aspects of memory to manage airspace operations effectively. Reflecting on her cognitive capabilities, she recalls specific traffic situations from a month ago, vividly remembers the day she obtained her license, and effortlessly recalls important procedural information for transferring aircraft to the next sector. Based on above, Explain how her memory influences her ability to manage air traffic efficiently and ensure the safety of flights. K5 (10)

6) Case Study :The last few days have seen exceptional fog at Delhi, leading to flight delays.While Delhi airport boasts of having four runways, the reality is that runway 10/28 has been out of operation for a long and the closure period has increased thrice in the past.

The fog period ranges from anywhere between mid December to early February and planning a closure of the runway which is Cat III B certified during this period along with not being able to get it back into operation on time has been partly responsible for the chaos that has ensued at Delhi.

Additionally, the compounding delay adds up at other stations, where the passengers don't even know that their aircraft is starting its day from Delhi. The challenge really comes from the lack of information or the lack of information in one go. Most complaints revolved around the flight being delayed by a certain period of time multiple times only to leave late at night. Departures alone cannot attract passengers, especially when there is competition in sight in the form of Air India group. The airline will have to redraw its SOPs if it has to maintain the edge it has always had.

Based on above answer the following questions:

1. Discuss how can IndiGo collaborate with airport authorities to improve the management of runway closures during foggy conditions? (3 marks)

2. Elaborate how can IndiGo optimize crew scheduling to prevent FDTL violations and minimize crew replacements during delays? (3 marks)

3. Discuss what strategies can IndiGo adopt to streamline passenger handling processes and minimize discomfort during delays and deboarding? (3 marks)

4. How can IndiGo collaborate with airport authorities to manage congestion and optimize airport capacity during delay periods? (3 marks)

swiftly and minimize disruptions to air traffic operations? Evaluate the communication and collaboration strategies you would employ as an ATC to effectively manage the situation and ensure the safety of both the affected aircraft and other air traffic.