R09

Code No: C7604

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.Tech I Semester Examinations March/April-2011
AIR TRANSPORTATION SYSTEMS
(AEROSPACE ENGINEERING)

Time: 3hours **Max.Marks:60**

Answer any five questions
All questions carry equal marks
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1. Discuss through a diagram the series of traffic management phases that an aircraft is subjected to and how they help in making an assessment of Air Traffic Management System (ATM). [12]

2. Describe with a test case the types of disruptions that affect the air carriers. [12]

3. Explain the ATM Interaction Architecture stating assumptions involved. [12]

4. Describe the modeling aspects of departure and arrival processes at airports using queuing theory. [12]

5. Discuss with the help of diagrams the safety feedback based ATM design and ATM safety iceberg used in accident risk assessment for advance air traffic management. [12]

6. Explain why humans are necessary in Air Traffic Management. [12]

7. What are the tools used for the assessment of the wake vortex induced accident and incident risks? Discuss flight path evolution model. [12]

8. Describe the geometric approaches used for conflict prediction of aircraft trajectories in Air Traffic Management and discuss their limitations. [12]

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