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Manipal Institute of Technology, Manipal

(A Constituent Institute of Manipal University)



VII SEMESTER B.TECH (AERONAUTICAL ENGINEERING) END SEMESTER EXAMINATIONS, DEC 2015/JAN 2016

SUBJECT: AIR-TRANSPORTATION AND AIRCRAFT MAINTENANCE
MANAGEMENT [AAE 431]

REVISED CREDIT SYSTEM

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ANY FIVE FULL** the questions.
- ❖ Missing data may be suitable assumed.

- 1A.** What is Aircraft Reliability engineering? Write down few example and explain in detail. (5)
- 1B.** Explain in detail about Aircraft Schedule Planning and their divisions. (3)
- 1C.** Explain various types of transport modes then do compare and write the conclusion. (2)
- 2A.** What are the major roles of IATA and ICAO in airline management and industry? Explain their functions also. (5)
- 2B.** What are 'Freedom of air" and 'Open sky agreement' in airline industry? Explain in detail about how it has influenced the revenue and scheduling of air transportation. (3)
- 2C.** What is acquisition cost in airline revenue? Explain their importance in management. (2)
- 3A.** Explain in detail about the advantages and disadvantages of Hub and Spoke system in air transportation. (5)
- 3B.** Describe the following (3)
- a) Least Time Track
 - b) Pairing in crew scheduling
 - c) Fleet Planning
- 3C.** Explain the general features of FRACAS in aircraft reliability requirements (2)

- 4A.** Write down the classification of maintenance practice and explain in detail. Also define Extended Range Operation in aircraft industry and its influence. **(5)**
- 4B.** What are the advantages of Budgeting and Budgetary Control in finance? **(3)**
- 4C.** What is fleet commonality and write their influence in airline expenditure. **(2)**
- 5A.** What are problems and limitations in Crew Scheduling in airline industry? Explain their features and factors should consider for proper scheduling. **(5)**
- 5B.** Describe the following
a) Waypoints
b) Transition altitude
c) Even flight level **(3)**
- 5C.** What is performance optimization is aircraft maintenance practice and write it advantages and disadvantageous. **(2)**
- 6A.** What is Forecasting methods? Explain their divisions and purposes. **(5)**
- 6B.** What are the technical parameters we need to consider for aircraft selection evaluation for an airline industry? Explain in briefly **(3)**
- 6C.** What are the physical constraints in fuel calculation for an aircraft? **(2)**