

Reg. No.

**VII SEMESTER B.TECH (AERONAUTICAL ENGINEERING)**  
**END SEMESTER EXAMINATIONS, NOV/DEC 2015**

**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.** Explain the types of airports according to its size, usage and ownership. Write down few points about factors that we need consider for fitting an airport for the community. **(5)**
- 1B.** Briefly write down the classifications of airline management, divisions and roles. **(3)**
- 1C.** Explain the limitations of air transportation compared to other modes of transport( at least 3 points) **(2)**
- 2A.** What is Forecasting in airline economics? Explain their types and their purposes in airline management. **(5)**
- 2B.** What are the main advantages of choosing an ocean track as route for an aircraft? And also mention how Standard Instrument Departure and Standard Terminal Arrival Route affecting for describing a flight route. **(3)**
- 2C.** What is maintenance sharing and how it's involving in improvement of maintenance practice? **(2)**
- 3A.** How the fuel calculation is involving with cost reduction in airline management? Explain in details about the factors which affecting fuel calculation. **(5)**
- 3B.** What are the criterial aspects that we need to look into for the selection of aircraft? Explain how its affecting the fleet of an airline. **(3)**
- 3C.** What are the extra attention we need to consider for the maintenance for ageing aircraft? Explain **(2)**
- 4A.** Explain the factors affecting for airport planning in detail. Also mention how we can fix the direction of runway for one particular airport. Write down one hypothetical example for this explanation. **(5)**

- 4B.** Write down in detail about different levels of Alert levels in aircraft reliability and what are Aircraft dispatch reliability and Aircraft system reliability. **(3)**
- 4C.** What is the function of screw compressor in ground handling units? Explain their working procedure and advantage over diesel compressors. **(2)**
- 5A.** Explain in details about Hub and Spoke scheduling. Write down their advantages, disadvantages and their multiplier effect in air transportation. **(5)**
- 5B.** Briefly explain the different ground handling units and services. Explain all with examples. **(3)**
- 5C.** What is meant by waypoint in airways? Identify different types of waypoints and write down their applications. **(2)**
- 6A.** What are the functions of Airline Management? Explain in details about each component of airline management. **(5)**
- 6B.** What are the parameters monitored for aircraft reliability in operation. Explain each term briefly. **(3)**
- 6C.** What is fleet commonality and explain how its affecting revenue of airlines. **(2)**