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**MANIPAL INSTITUTE OF TECHNOLOGY**  
**MANIPAL**

*A Constituent Institution of Manipal University*

**VII SEMESTER B.TECH. (AERONAUTICAL ENGINEERING)**

**END SEMESTER EXAMINATIONS, NOV 2016**

**SUBJECT: AIR TRANSPORTATION AND AIRCRAFT MAINTENANCE**

**MANAGEMENT [AAE 431]**

**REVISED CREDIT SYSTEM**

**(30/11/2016)**

Time: 3 Hours

MAX. MARKS: 50

**Instructions to Candidates:**

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

- 1A.** What are the responsibilities and functions of DGCA? **(3)**
- 1B.** Discuss the development of Air transportation in India. **(3)**
- 1C.** Explain the classification of Airports based on takeoff and landing, geometric design, length of runway and wing span and outer main gear wheel span. **(4)**
- 2A.** What is forecasting? Explain their types and purpose of forecasting. **(3)**
- 2B.** Explain Route selection and capitol acquisition. **(3)**
- 2C.** What do you understand by waypoints in airways? Explain the types of waypoints and write their applications. **(4)**
- 3A.** What is fleet commonality and explain how it is affecting revenue of airlines. **(3)**
- 3B.** What are the critierial aspects that we need to look into for the selection of aircraft? Explain how it is affecting the fleet of an airline. **(3)**
- 3C.** What are the factors that had led to the trend towards leasing in aircraft fleet? **(4)**
- 4A.** Explain in detail about Ground operations and facility. **(3)**
- 4B.** How hub and spoke scheduling is advantageous over point to point scheduling? **(3)**

- 4C.** Explain the operational factors which are important in flight operations and crew scheduling. **(4)**
- 5A.** What are the parameters monitored for aircraft reliability in operation. Explain each term briefly. **(3)**
- 5B.** What is the procedure for ageing aircraft maintenance? Explain. **(3)**
- 5C.** Write about ETOPS performance considerations. **(4)**
- 6A.** What is budget and budgetary control? Also explain the advantages and characteristics of budget with respect to aircraft maintenance. **(3)**
- 6B.** What is turbine oil maintenance? Explain the procedure of turbine engine vibration measurement and what are the corrective procedures for it? **(3)**
- 6C.** What is NDT in aircraft maintenance? Explain the common NDT methods. **(4)**

