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**MANIPAL INSTITUTE OF TECHNOLOGY**  
 Manipal University, Manipal – 576 104



**DEPARTMENT OF AERONAUTICAL AND AUTOMOBILE ENGG**  
**VI SEM. B.Tech (AERONAUTICAL) DEGREE END SEMESTER EXAMINATIONS**  
**JAN/MAY 2016**  
**SUBJECT: AIRCRAFT AND SPACE TRANSPORTATION SYSTEM (AAE-348)**  
**REVISED CREDIT SYSTEM**

Time: 3 Hours.

Max. Marks: 50

**Instructions to Candidate:**

- ❖ Answer **ANY FIVE FULL** questions.
- ❖ Missing data, if any, may be suitably assumed.
- ❖ **Draw all the diagrams with pencil only**

- 1 A) Explain the different parts of the aircraft with neat sketches. (4)
- 1 B) Discuss the role and mission of IATA trade body. (6)
  
- 2 A) Describe the aircraft fuel calculation factors. (4)
- 2 B) Explain the different factors involved in fleet planning. (6)
  
- 3 A) Write a short notes on different types of joining methods used in aircraft industry. (4)
- 3 B) Explain the different types of aircraft maintenance with neat flow chart diagram. (6)
  
- 4 A) Explain the various components of solid propellant rocket with neat diagram. (4)
- 4 B) Explain the advantages and limitations of solid, liquid and Hybrid propellant rockets. (6)
  
- 5 A) What are all the qualities required for a system engineer? Explain. (4)
- 5 B) Explain the system engineering design procedure steps followed in the aircraft industry. (6)

- 6 A) Explain the advantages of international space station. (4)
- 6 B) Select an aircraft and write a case study such that it should cover all the phases of aircraft design. (6)

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