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MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL

A Constituent Institution of Manipal University

IV SEMESTER B.TECH. (AERONAUTICAL ENGINEERING)

END SEMESTER EXAMINATIONS, APRIL/MAY 2017

SUB: INTRODUCTION TO AEROSPACE ENGINEERING [AAE 3281]

**REVISED CREDIT SYSTEM
 (02/05/2017)**

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitable assumed.

- 1A. How the aircraft is moving forward? Also explain with suitable examples the differences between air breathing vehicles and non-air breathing vehicles. (4)
- 1B. Discuss the role, mission and standards of IATA and ICAO trade bodies. (6)
- 2A. Explain with neat diagrams the differences between bypass engines and mixed bypass engine. (4)
- 2B. Explain the different types of aircraft maintenance with neat flow chart diagram. (6)
- 3A. Describe the role of low wing and high wing concept in aircraft. (4)
- 3B. Explain the construction, working, advantages and limitations of solid, liquid and Hybrid propellant rockets. (6)
- 4A. With neat diagrams explain the different types of fuselage structures. (4)
- 4B. Explain the different types of fluid flows used to describe the aircraft aerodynamics. (6)
- 5A. Discuss the aircraft landing gear design considerations. (4)
- 5B. Explain the design based engines with neat line diagrams (6)