

Reg. No.									
----------	--	--	--	--	--	--	--	--	--



**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  
 (00/00/2017)**

Time: 3 Hours

MAX. MARKS: 50

**Instructions to Candidates:**

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

- 1A.** Write the classifications of jet engines. (4)
- 1B.** Discuss with the help of flow chart diagrams discuss the functions of airline management. (6)
- 2A.** Write short note on the following: (i) Angle of attack (ii) Drag bucket (iii) ground clearance. (iv) Fuselage clearance angle. (4)
- 2B.** Classify different types of rockets and missiles. Explain with suitable examples. (6)
- 3A.** Describe the airfoil nomenclature. Also explain the different types of airfoils used in aircraft. (4)
- 3B.** Explain with the neat line diagram gas generator cycle (GGC) of liquid propellant rocket. (6)
- 4A.** Explain with neat diagrams different types of landing gear systems used in aircraft. (4)
- 4B.** Explain the different types of fuel injectors used in combustion chamber. (6)
- 5A.** Discuss the Bernoulli's principle. Also describe the terms parasite drag and total drag in aerodynamics. (4)
- 5B.** Explain clearly materials used for airframe constructions. (6)