

Code: 9A21401

B.Tech II Year II Semester (R09) Supplementary Examinations December/January 2015/2016

INTRODUCTION TO AEROSPACE ENGINEERING

(Aeronautical Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 Compare the LTA (lighter than air) and HTA (heavier than air) flights and out of these two which is more preferred. Why?
- 2 (a) Describe the evolution of Indian science and technology with some examples.
(b) Describe the renaissance.
- 3 Describe the anatomy (parts) of aircraft with neat sketch.
- 4 Write short notes on the following:
 - (a) Meteoroids and micrometeoroids.
 - (b) Space debris.
 - (c) LEO (low earth orbit).
- 5 Write short note on the following:
 - (a) Communication and telemetry.
 - (b) Thermal control.
 - (c) Satellite station keeping.
- 6 Explain the goals of human flight missions. Describe the design of space suits of US and Russian. Which one is the best space suit among them? Why?
- 7 Describe the design process of spacecraft in sequence along with line diagram.
- 8 Derive the expression for aerodynamic forces and moment occurs on a wing.
