

Code: AE2T5

I B.Tech-II Semester-Regular Examinations - July 2013

**INTRODUCTION TO AERONAUTICAL
ENGINEERING
(For Aeronautical Engineering)**

Duration: 3 hours

Marks: 5x14=70

Answer any FIVE questions. All questions carry equal marks

- 1 a) Explain the developments in Aerodynamics for the last ten Years. 7 M
- b) Explain about Multi-planes, biplanes, monoplanes along with their advantages and disadvantages 7 M
- 2 a) What are the basic instruments of flying enumerate their merits and demerits 7 M
- b) Explain about different types of Flight vehicles along with their advantages 7 M
- 3 a) What are the physical properties of atmosphere and their importance in relation to smooth running of airplane 7 M

- b) How do we classify the atmosphere according to Height from the Earth surface 7 M
- 4 a) Discuss different types of constructions of airplane structures 7 M
- b) Discuss in detail about Fuselage structure 7 M
- 5 a) Explain the use of Propeller and different jets for thrust production 7 M
- b) Discuss in detail about different power plants used in airplanes 7 M
- 6 a) What are the sources of Drag 7 M
- b) Discuss about different aerodynamic forces on a wing 7 M
- 7 a) Discuss in detail about Aircraft performance parameters 7 M
- b) How performance of an aircraft is measured in steady flight 7 M
- 8 a) What is meant by Airplane static stability and Discuss different factors affecting 7 M
- b) Differentiate between dynamic stability and longitudinal stability 7 M