

Code No: R07A12101

R07

Set No. 2

I B.Tech Examinations, May 2011
INTRODUCTION TO AEROSPACE ENGINEERING
Aeronautical Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Write shorts notes on: [8+8]
 - (a) Gliding and climbing flight.
 - (b) Longitudinal stability.
2. (a) What is the purpose of drag and anti-drag wires?
(b) State and explain Stalling. [10+6]
3. Derive expressions for the pressure, velocity on the surface of a rotating circular cylinder in a uniform flow. [16]
4. (a) Discuss about the material commonly used in flight structure?
(b) State the advantages of aluminum which makes it suitable for aircraft industry. [8+8]
5. (a) Mention the merits of turbojet engine.
(b) Mention various aircrafts using the power plants of jet and piston engines.
(c) Name the aircrafts having turbo shaft engines. [6+6+4]
6. (a) What methods may be used to power gyro instruments?
(b) How does the gyro indicate a rate of turn? [8+8]
7. What is the difference between lift and drag? Explain with neat sketch the forces acting on the aircraft in level flight? [16]
8. Discuss about the selection of commonly used materials in construction of satellite structures. [16]

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Set No. 4

I B.Tech Examinations, May 2011
INTRODUCTION TO AEROSPACE ENGINEERING
Aeronautical Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Derive expressions for the pressure, velocity on the surface of a rotating circular cylinder in a uniform flow. [16]
2. (a) What methods may be used to power gyro instruments?
(b) How does the gyro indicate a rate of turn? [8+8]
3. Discuss about the selection of commonly used materials in construction of satellite structures. [16]
4. (a) What is the purpose of drag and anti-drag wires?
(b) State and explain Stalling. [10+6]
5. Write shorts notes on: [8+8]
 - (a) Gliding and climbing flight.
 - (b) Longitudinal stability.
6. (a) Discuss about the material commonly used in flight structure?
(b) State the advantages of aluminum which makes it suitable for aircraft industry. [8+8]
7. What is the difference between lift and drag? Explain with neat sketch the forces acting on the aircraft in level flight? [16]
8. (a) Mention the merits of turbojet engine.
(b) Mention various aircrafts using the power plants of jet and piston engines.
(c) Name the aircrafts having turbo shaft engines. [6+6+4]

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R07

Set No. 1

I B.Tech Examinations, May 2011
INTRODUCTION TO AEROSPACE ENGINEERING
Aeronautical Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Write shorts notes on: [8+8]
 - (a) Gliding and climbing flight.
 - (b) Longitudinal stability.
2.
 - (a) Mention the merits of turbojet engine.
 - (b) Mention various aircrafts using the power plants of jet and piston engines.
 - (c) Name the aircrafts having turbo shaft engines. [6+6+4]
3.
 - (a) What is the purpose of drag and anti-drag wires?
 - (b) State and explain Stalling. [10+6]
4.
 - (a) What methods may be used to power gyro instruments?
 - (b) How does the gyro indicate a rate of turn? [8+8]
5. Derive expressions for the pressure, velocity on the surface of a rotating circular cylinder in a uniform flow. [16]
6. What is the difference between lift and drag? Explain with neat sketch the forces acting on the aircraft in level flight? [16]
7. Discuss about the selection of commonly used materials in construction of satellite structures. [16]
8.
 - (a) Discuss about the material commonly used in flight structure?
 - (b) State the advantages of aluminum which makes it suitable for aircraft industry. [8+8]

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R07**Set No. 3**

I B.Tech Examinations, May 2011
INTRODUCTION TO AEROSPACE ENGINEERING
Aeronautical Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Discuss about the selection of commonly used materials in construction of satellite structures. [16]
2. (a) What is the purpose of drag and anti-drag wires?
(b) State and explain Stalling. [10+6]
3. Derive expressions for the pressure, velocity on the surface of a rotating circular cylinder in a uniform flow. [16]
4. Write short notes on: [8+8]
 - (a) Gliding and climbing flight.
 - (b) Longitudinal stability.
5. (a) What methods may be used to power gyro instruments?
(b) How does the gyro indicate a rate of turn? [8+8]
6. (a) Mention the merits of turbojet engine.
(b) Mention various aircrafts using the power plants of jet and piston engines.
(c) Name the aircrafts having turbo shaft engines. [6+6+4]
7. What is the difference between lift and drag? Explain with neat sketch the forces acting on the aircraft in level flight? [16]
8. (a) Discuss about the material commonly used in flight structure?
(b) State the advantages of aluminum which makes it suitable for aircraft industry. [8+8]
