

Unit 2 - Week 01

Course outline

How does an NPTEL online course work?

Week 01

- General Introduction: Airplane Performance Characteristics
- George Cayley: Concept of Lift and Drag
- Introduction to airplane and its components
- Hansa 3 Aircraft and its Primary Systems
- Concept of Lift Aerofoil: Wing : Complete Aircraft
- Drag Polar
- Quiz : Assignment 01**
- Introduction to Airplane Performance :Feedback For Week 1 Released
- Assignment 01 Solution

Week 02

Week 03

Week 04

WEEK 05

WEEK 06

WEEK 07

WEEK 08

Text Transcripts

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Assignment 01

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-02-12, 23:59 IST.

1) Among the following which instrument measures the altitude of aircraft? 1 point

- Gyroscope
- Artificial Horizon
- Altimeter
- Magnetic compass

No, the answer is incorrect.
Score: 0

Accepted Answers:
Altimeter

2) Among the following which instrument measures the speed of aircraft? 1 point

- Gyroscope
- Altimeter
- Artificial Horizon
- Pitot tube

No, the answer is incorrect.
Score: 0

Accepted Answers:
Pitot tube

3) In steady-straight-level flight, Lift is perpendicular to? 1 point

- Weight
- Drag
- Free stream velocity
- Both Drag & Free stream velocity

No, the answer is incorrect.
Score: 0

Accepted Answers:
Both Drag & Free stream velocity

4) Which angle is responsible to generate Thrust? 1 point

- Pitch angle
- Angle of attack
- Flight path angle
- None of these

No, the answer is incorrect.
Score: 0

Accepted Answers:
None of these

5) Which one of following airfoil section has a zero camber? 1 point

- NACA0009
- OFA102
- NACA 23012
- Both Option 'NACA0009' and 'NACA 23012' are correct

No, the answer is incorrect.
Score: 0

Accepted Answers:
NACA0009

6) The thrust producing device for aircraft is? 1 point

- Aircraft wing
- Aircraft fuselage
- Aircraft Engine
- Aircraft Tail

No, the answer is incorrect.
Score: 0

Accepted Answers:
Aircraft Engine

7) Which airfoil section is symmetric? 1 point

- NACA0012
- NACA0018
- NACA0009
- All of these

No, the answer is incorrect.
Score: 0

Accepted Answers:
All of these

8) One of the basic criteria for selecting the airfoil is? 1 point

- Cd shape of the usable Cl region
- Effectiveness with control surfaces
- Effectiveness with power plant
- Both Option 'Cd shape of the usable Cl region' and 'Effectiveness with control surfaces' are correct

No, the answer is incorrect.
Score: 0

Accepted Answers:
Both Option 'Cd shape of the usable Cl region' and 'Effectiveness with control surfaces' are correct

9) For the conventional airplane the wing loading value generally? 1 point

- Less than one
- Greater than one
- Depends upon the power plant
- Both option 'less than one' and 'greater than one' are possible

No, the answer is incorrect.
Score: 0

Accepted Answers:
Greater than one

10) Flight path angle (γ) of a fixed wing airplane during coordinated turn will be? 1 point

- $\gamma=0^\circ$
- $\gamma=90^\circ$
- $0^\circ < \gamma < 90^\circ$
- Provided information is not sufficient to draw any conclusion

No, the answer is incorrect.
Score: 0

Accepted Answers:
 $\gamma=0^\circ$