

Unit 3 - Week 02

Course outline

How does an NPTEL online course work?

Week 01

Week 02

- Revision
- Standard Atmosphere: Description and Modeling
- Measuring Instruments: Altimeter, Airspeed Indicator
- Equations of Motion: Static Performance
- Thrust Required, Power Required: Cruise
- Excess Thrust and Power: Climb Angle and Rate of Climb

Quiz : Assignment 02

Feedback For Week 2

Assignment 02 Solution

Week 03

Week 04

WEEK 05

WEEK 06

WEEK 07

WEEK 08

Text Transcripts

VIDEO DOWNLOADS

Assignment 02

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) If the weight of the aircraft is 765kg and lift to drag ratio of aircraft is 11, what is the Thrust required in Newton at cruise condition is? **1 point**

- 682.24
- 600.00
- 765.00
- 77.981

No, the answer is incorrect.

Score: 0

Accepted Answers:
682.24

2) If the weight of the aircraft is 765kg and lift to drag ratio of aircraft is 11, The aircraft flying at a speed of 50 m/s. What is the power required in kilowatt at cruise condition? **1 point**

- 76.50
- 3.477
- 7.690
- 34.11

No, the answer is incorrect.

Score: 0

Accepted Answers:
34.11

3) The variation of the properties in the standard atmosphere are calculated based on the Assumption. **1 point**

- Constant value of entropy
- Constant value of enthalpy
- Constant value of acceleration due to gravity at standard sea level condition
- None of the these

No, the answer is incorrect.

Score: 0

Accepted Answers:
Constant value of acceleration due to gravity at standard sea level condition

4) The Temperature ratio at 16km and 12 km is **1 point**

- 0.95
- 0.89
- 1.00
- 1.21

No, the answer is incorrect.

Score: 0

Accepted Answers:
1.00

5) The density ratio at 20km and 11km is? **2 points**

- 0.270
- 0.196
- 0.286
- 0.259

No, the answer is incorrect.

Score: 0

Accepted Answers:
0.259

6) The Pressure ratio at 20km and 10 km is ? **2 points**

- 1.000
- 0.458
- 0.812
- 0.222

No, the answer is incorrect.

Score: 0

Accepted Answers:
0.222

7) High altitude long endurance Unmanned Air Vehicle is flying at an altitude of 17 km of geopotential altitude the density in (kg/m^3) at that altitude will be nearest to ? **2 points**

- 0.374724
- 0.141394
- 0.368953
- 0.398953

No, the answer is incorrect.

Score: 0

Accepted Answers:
0.141394