

Unit 6 - WEEK 05

Course outline

How does an NPTEL online course work?

Week 01

Week 02

Week 03

Week 04

WEEK 05

- Revision..
- V stall: Cruise and Manoeuvre
- Flaps: High Lift Devices to Reduce Take off / Landing Distance
- Take off: Warm-up Lecture
- Take off Performance
- Take off Performance: Continued...
- Quiz : Assignment 05
- Feedback For Week 5
- Assignment 05 Solution

WEEK 06

WEEK 07

WEEK 08

Text Transcripts

VIDEO DOWNLOADS

Assignment 05

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

Due on 2020-03-04, 23:59 IST.

1) For an aircraft the stall velocity for cruise (1-g stall velocity) is 25 m/sec and during a manoeuvre the load factor is 4. The stall velocity during this manoeuvre will be **2 points**

- 25 m/s
- 50 m/s
- 12.25 m/s
- 60 m/s

No, the answer is incorrect.
Score: 0

Accepted Answers:
50 m/s

2) Weight of an aircraft is 600 kg, during a manoeuvre the load factor is 5. The lift during this manoeuvre will be **2 points**

- 132.3 KN
- 29.43 KN
- 17.66 KN
- 13.50 KN

No, the answer is incorrect.
Score: 0

Accepted Answers:
29.43 KN

3) For an aircraft: **2 points**

$$C_{L_{max}} = 2.39, \text{ Weight} = 30000 \text{ kg}, S = 88.26 \text{ m}^2$$

$$\text{Density} = 1.210 \text{ kg / m}^3$$

What is the value of V_{stall}

- 65.33 m/s
- 48.02 m/s
- 29.69 m/s
- 38.77 m/s

No, the answer is incorrect.
Score: 0

Accepted Answers:
48.02 m/s

4) Average flight velocity during flare is **2 points**
[Hint: $V_f = 1.23 V_{stall}$]

- 62.33 m/s
- 41.67 m/s
- 59.06 m/s
- 78.77 m/s

No, the answer is incorrect.
Score: 0

Accepted Answers:
59.06 m/s

5) Touchdown velocity will be **2 points**
[Hint: $V_{TD} = 1.15 V_{stall}$]

- 89.17 m/s
- 55.22 m/s
- 38.41 m/s
- 63.64 m/s

No, the answer is incorrect.
Score: 0

Accepted Answers:
55.22 m/s