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NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » **Design of fixed wing Unmanned Aerial Vehicles**
(course)

Announcements (announcements) **About the Course** (https://swayam.gov.in/nd1_noc19_ae06/preview)

Ask a Question (forum) Progress (student/home) Mentor (student/mentor)

Unit 5 - Week 4

Course outline

How to access the portal

Week 1

Week 2

Week 3

Week 4

- Lecture 11 - Thrust required and Power required (unit? unit=26&lesson=27)
- Lecture 12 - Calculation of Performance parameters and selection of power plant (unit? unit=26&lesson=28)
- Quiz : **Assignment 04** (assessment? name=64)

Assignment 04

The due date for submitting this assignment has passed. **Due on 2019-09-25, 23:59 IST.**
As per our records you have not submitted this assignment.

1) The total drag variation with velocity at two different altitudes is presented in Fig. 1. What is **2 points** the correct relationship between these two altitudes?

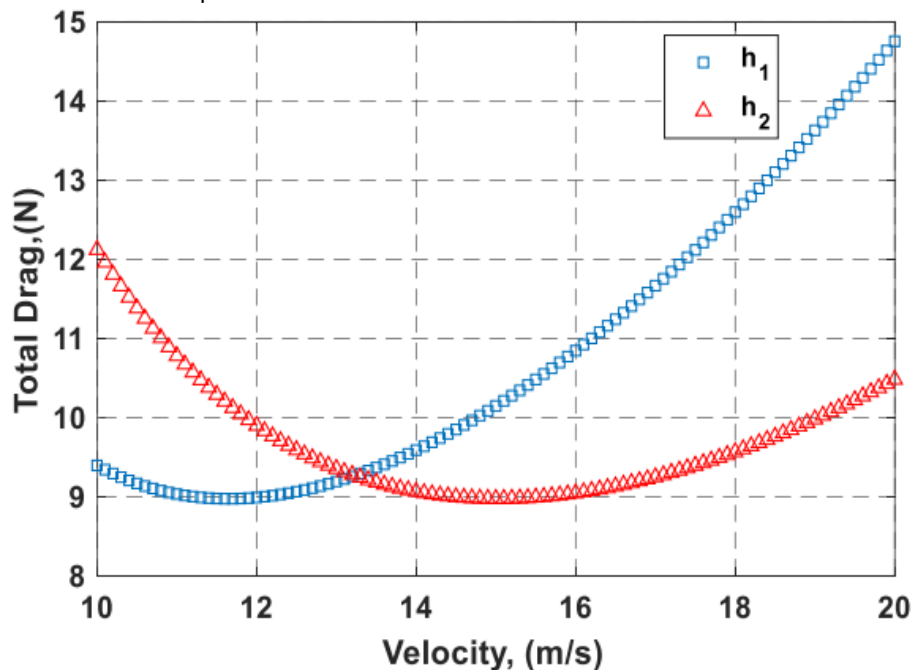


Fig. 1

- Feedback For Week 4 (unit? unit=26&lesson=68)
- Assignment 04 Solution (unit? unit=26&lesson=72)

Week 5

Week 6

Week 7

Week 8

Text Transcription

$h_2 > h_1$



$h_2 = h_1$



$h_2 < h_1$



$h_1 \gg h_2$

No, the answer is incorrect.

Score: 0

Accepted Answers:

$h_2 > h_1$

2) The total power variation with velocity at two different altitudes is presented in Fig. 1. What is **2 points** the correct relationship between these two altitudes?

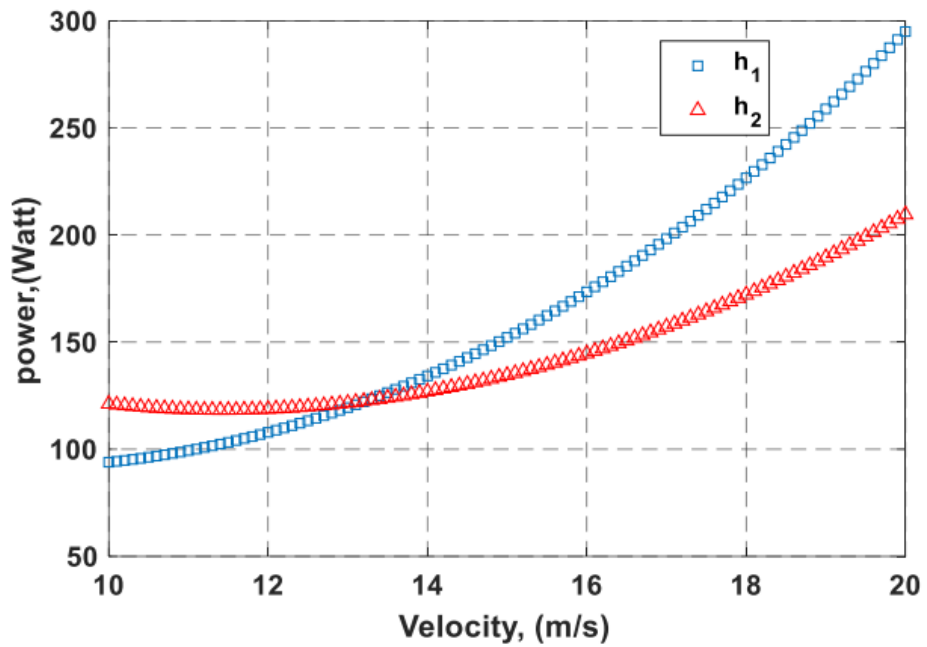


Fig. 2



$h_2 > h_1$



$h_2 = h_1$



$h_1 > h_2$



$h_1 \gg h_2$

No, the answer is incorrect.

Score: 0

Accepted Answers:

$h_2 > h_1$

3) The lift to drag variation with velocity at two different altitudes is presented in Fig. 1. What is **2 points** the correct relationship between these two altitudes?

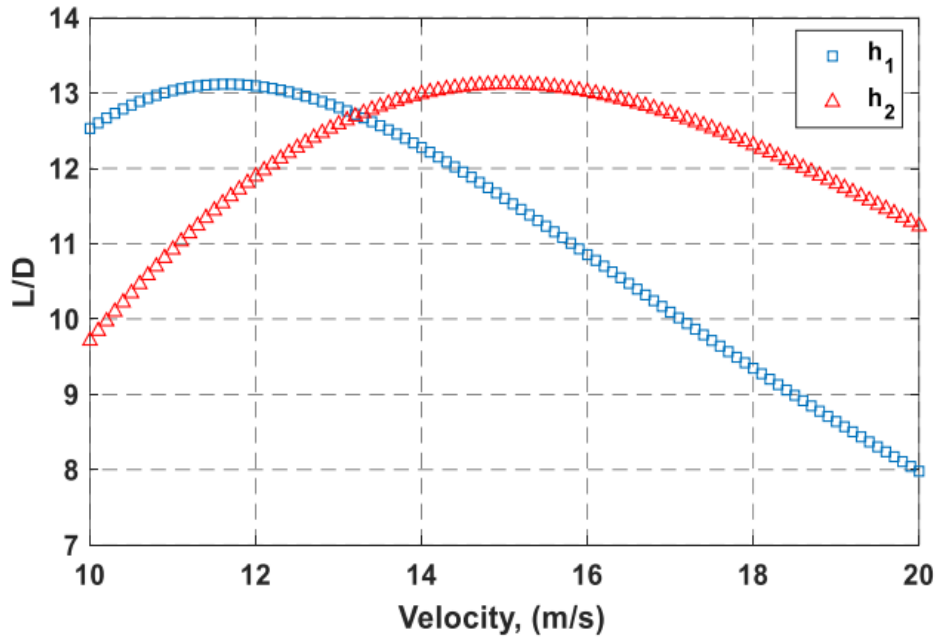


Fig. 3

- $h_2 > h_1$
- $h_1 = h_2$
- $h_1 > h_2$
- $h_1 \gg h_2$

No, the answer is incorrect.

Score: 0

Accepted Answers:

$h_2 > h_1$

4) If the stall angle of aircraft at mean sea level and 5km altitude are $\alpha_{stall_{MSL}}$ and $\alpha_{stall_{5km}}$ respectively. What is the correct relationship between these two angles?

2 points

- $\alpha_{stall_{MSL}} > \alpha_{stall_{5km}}$
- $\alpha_{stall_{MSL}} = \alpha_{stall_{5km}}$
- $\alpha_{stall_{MSL}} < \alpha_{stall_{5km}}$
- None of these

No, the answer is incorrect.

Score: 0

Accepted Answers:

$\alpha_{stall_{MSL}} = \alpha_{stall_{5km}}$

5) If the stall velocity of aircraft at mean sea level and 5km altitude are $V_{stall_{MSL}}$ and $V_{stall_{5km}}$ respectively. What is the correct relationship between these two velocities?

2 points

- $V_{stall_{5km}} > V_{stall_{MSL}}$



$$V_{stall_{MSL}} = V_{stall_{5km}}$$



$$V_{stall_{MSL}} < V_{stall_{5km}}$$



None of these

No, the answer is incorrect.

Score: 0

Accepted Answers:

$$V_{stall_{MSL}} < V_{stall_{5km}}$$