

X


 [\(https://swayam.gov.in\)](https://swayam.gov.in)

 [\(https://swayam.gov.in/nc_details/NPTEL\)](https://swayam.gov.in/nc_details/NPTEL)

reviewer4@nptel.iitm.ac.in ▾

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 6 - Week 5

Course outline

How to access the portal

Week 1

Week 2

Week 3

Week 4

Week 5

- Lecture 13 - Climb Performance, Engine Sizing and Power Plant selection (unit? unit=31&lesson=32)
- Lecture 14 - Weight Estimation , Common propulsion systems (unit? unit=31&lesson=33)
- Lecture 15 - Weight

Assignment 05

The due date for submitting this assignment has passed. **Due on 2019-10-02, 23:59 IST.**
As per our records you have not submitted this assignment.

1) Generally, the load factor ($n=L/W$) during climb will be?

2 points

- >1
- =0
- <1
- =1

No, the answer is incorrect.
Score: 0

Accepted Answers:
<1

2) The excess power of the aircraft determines?

2 points

- Rate of climb performance
- Straight-Level-flight performance
- Gliding-flight performance
- None of these

No, the answer is incorrect.
Score: 0

Accepted Answers:
Rate of climb performance

3) To improve the climb performance, which one of the following is the correct combination?

2 points

- Higher the weight, higher the drag and higher the thrust
- Lower the weight, lover the drag and lover the thrust

Estimation
contd., Electric
propulsion,
Battery Sizing
(unit?
unit=31&lesson=34)

Quiz :
Assignment 05
(assessment?
name=70)

Feedback For
Week 5 (unit?
unit=31&lesson=71)

Assignment 05
Solution (unit?
unit=31&lesson=74)

Week 6

Week 7

Week 8

**Text
Transcription**

- Higher the weight, lower the drag and higher the thrust
- Lower the weight, lower the drag and higher the thrust

No, the answer is incorrect.

Score: 0

Accepted Answers:

Lower the weight, lower the drag and higher the thrust

4)

2 points

Data for question No: 4 to 5

The drag polar of a propeller driven aircraft is given by

$$C_D = 0.039 + 0.071C_L^2$$

Lift curve slope of the wing ($C_{L\alpha}$) is 0.09/deg and zero lift angle (α_0) is -1.5°

The Aerodynamic efficiency (L/D) at minimum power condition will be?

- 16.21
- 17.47
- 8.228
- 12.28

No, the answer is incorrect.

Score: 0

Accepted Answers:

8.228

5) The angle of attack of Aircraft for minimum power condition?

2 points

- 12.76
- 10.02
- 14.35
- Not possible to fly at minimum power condition

No, the answer is incorrect.

Score: 0

Accepted Answers:

12.76

