Assignment 08

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

1) Data for question No: 1 to 4
The drag polar of an UAV is given by
\[ C_{DP} = 0.03 + 0.005 C_L^2 \]
If the weight of the UAV is 5kg, Wing area of UAV is 1m². If UAV flight speed during climb (at mean sea level) is 15m/s
Note: Climb angle is 15°
The time required (in seconds) to climb from mean sea level to 100 m?

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) 25.00, 26.50

2) The ratio of lift to drag coefficient will be?

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) 9.20, 10.20

3) The value of thrust required (in Newton) to perform this climb will be?

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) 17.00, 18.00

4) The load factor (mL/v) in climb will be? (correct to two decimal point)

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) 0.95, 0.97

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

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

6) For a fixed flight path angle and altitude required to climb from mean sea level. If the flight velocity of UAV during climb is increases, then?

- Time to climb the desired altitude will increase
- Time to climb the desired altitude will decrease
- Time to climb the desired altitude remain unchanged
- Cannot be concluded from given information

No, the answer is incorrect.
Score: 0
Accepted Answers:
Time to climb the desired altitude will decrease

7) The excess power of the UAV determines?

- Level flight performance
- Landing flight performance
- Rate of climb performance
- Take-off flight performance

No, the answer is incorrect.
Score: 0
Accepted Answers:
Rate of climb performance