Unit 5 - Week 4

Assignment 4

The due date for submitting this assignment has passed. **Due on 2016-08-16, 23:59 IST.**
As per our records you have not submitted this assignment.

1) **Data for Questions from 1 to 5.** ***1 point***

For a given aircraft following is the longitudinal Matrix

The Characteristic equation is given by

- ○
- ○
- ○
- ○

No, the answer is incorrect.
Score: 0

Accepted Answers:

2) The roots of short period mode are ***1 point***

- ○
- ○
- ○
- ○

No, the answer is incorrect.
Score: 0

Accepted Answers:

3) The roots of Phugoid mode are ***1 point***

- ○
- ○
- ○
- ○

No, the answer is incorrect.
Score: 0

Accepted Answers:

4) The damping ratio of two modes are ***1 point***

- ○
- ○

Week 7

Week 8

No, the answer is incorrect.
Score: 0

Accepted Answers:

5) The undamped natural frequencies (rad/sec) of the two modes are *1 point*

No, the answer is incorrect.
Score: 0

Accepted Answers:

6) **Data for Questions from 6-10** *1 point*

For an aircraft, the roots of the longitudinal characteristic equation are as shown in the figure.

The roots of short period mode are

No, the answer is incorrect.
Score: 0

Accepted Answers:

7) The roots of Phugoid mode are *1 point*

No, the answer is incorrect.
Score: 0

Accepted Answers:

8) Calculate the natural frequency (rad/sec) and damping ratio for the short period mode *1 point*

- 3.9 and 0.64
- 3.6 and 0.55
- 2.6 and 0.35
- 4.6 and 0.35

No, the answer is incorrect.
Score: 0

Accepted Answers:
3.9 and 0.64

9) Calculatethe natural frequency and damping ratio for the phugoid mode. *1 point*

- 0.40 and 0.25
- 0.04 and 0.025
- 0.20 and 0.020

- 0.02 and 0.25

No, the answer is incorrect.
Score: 0

Accepted Answers:
0.20 and 0.020

10) Assuming two-degree approximation for the phugoid mode. Estimate the flight speed for which the roots are given *1 point*

- 55.66 m/s
- 69.36 m/s
- 40.33 m/s
- 45.33 m/s

No, the answer is incorrect.
Score: 0

Accepted Answers:
69.36 m/s

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