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NPTEL

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Courses » Aircraft Dynamic Stability & Design of Stability Augmentation System

Announcements **Course** Ask a Question Progress

Unit 6 - Week 5

Course outline

How to access the portal

Week 1

Week 2

Week 3

Week 4

Week 5

- Lecture 25
Lateral Directional Stability Derivatives
- Lecture 26
Lateral Directional Stability Derivatives Cont...
- Lecture 27
Perturbed Equation of Motion for Lateral Dynamics
- Lecture 28
Modes of Lateral Directional Dynamics
- Lecture 29
Spiral and Dutch Roll modes Approximation
- Lecture 30
Routh–Hurwitz Stability Criterion
- Quiz :
Assignment 5

Assignment 5

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

1) If the derivatives have the usual sign, then the condition for spiral mode to be stable is 1 point

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No, the answer is incorrect.

Score: 0

Accepted Answers:

2) To make spiral mode stable a designer should 1 point

Statement 1: Increase Dihedral Effect

Statement 2: Increase Yaw damping

- Statement 1 is True, Statement 2 is False
- Statement 1 is False, Statement 2 is True
- Both are True
- Both are False

No, the answer is incorrect.

Score: 0

Accepted Answers:

Both are True

3) Determine the stability of the characteristic equation given by 2 points

- Stable
- Unstable
- Marginally Stable
- None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

Unstable

4) Determine the range of K such that the characteristic equation $P(s)$ is 2 points
stable

- [Solutions for Assignment 5](#)
- [Week 6](#)
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No, the answer is incorrect.

Score: 0

Accepted Answers:

5) Lateral directional matrix is given by

2 points

The characteristic equation is given by

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No, the answer is incorrect.

Score: 0

Accepted Answers:

6) The roots of the characteristic equation derived from Ques. 5 are

2 points

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No, the answer is incorrect.

Score: 0

Accepted Answers:



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