Assignment 04

The due date for submitting this assignment has passed. Due on 2019-08-28, 23:59 IST. As per our records you have not submitted this assignment.

1) DATA FOR QUESTION 1 to 5  

2 points
Figure 1 presents the planform geometry of a wing alone aircraft (wing span of 6 meter and mean aerodynamic chord of 1 meter). The cross section of the aircraft is NACA 23112 ($C_{m_{max}} = -0.068$) and the variation of its $C_L$ with $\alpha$ is presented in Fig.2. (Assume elliptical lift distribution).

![Figure 1](image1)

Find the value of lift curve slope of wing ($C_{L_{\alpha}}$) per degree?

- 0.08243
- 0.36587
- 0.87549
- 0.29000

No, the answer is incorrect.
Score: 0
Accepted Answers: 0.08243

2) Figure out the lift coefficient of wing at zero-degree angle of attack ($C_{L_0}$)?

- 0.2986
- 0.3263
- 0.0456
- 0.0824

No, the answer is incorrect.
Score: 0
Accepted Answers: 0.0824

3) The value of pitching moment coefficient of wing at zero-degree angle of attack ($C_{m_0}$) will be?

- -0.0474
- +0.0062

No, the answer is incorrect.
Score: 0
Accepted Answers: -0.0474
4) What will be the value of pitch static stability derivative of wing \( (C_m) \) per radian?  

-0.0010  
-0.0062  
No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
-0.0474

5) Find the location of neutral point of wing \( (X_{NP}) \) from the wing leading edge in mm?  

250.0  
0.000  
150.0  
180.0  
No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
250.0