Assignment 07

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

1. If the center of gravity of the aircraft moves backward towards the rear of the aircraft, the aircraft will be: 1 point
   (a) Less stable
   (b) More stable
   (c) Less maneuverable
   (d) More maneuverable

   No, the answer is incorrect. Explanation:
   Stability and Control

2. To have a stable configuration and trim a conventional airplane at positive angle of attack which of the following arrangement is done: 1 point
   (a) CG of airplane should be ahead of neutral point
   (b) CG of airplane should be behind of neutral point
   (c) CG of airplane should be equal to neutral point
   (d) CG of airplane should be not depend on CD location

   No, the answer is incorrect. Explanation:
   Stability and Control

3. For a delta wing, Cl_{cruise} is: 1 point
   (a) Positive
   (b) Negative
   (c) Zero
   (d) Cannot say

   No, the answer is incorrect. Explanation:
   Analysis of Flight

4. If the elevator size is increased, keeping the tail area same. The static longitudinal stability will: 1 point
   (a) Increase
   (b) Decrease
   (c) Remain same
   (d) Cannot say

   No, the answer is incorrect. Explanation:
   Analysis of Flight

5. If the airplane without changing any other dimensions. The distance of aerodynamic center of tail from CG_{cruise} is increased. Due to the change the: 1 point
   (a) Longitudinal stability of aircraft will increase
   (b) Longitudinal stability of aircraft will decrease
   (c) Longitudinal stability of aircraft will remain same
   (d) Cannot say

   No, the answer is incorrect. Explanation:
   Analysis of Flight

6. If the distance between aerodynamic center of tail and CG_{cruise} is reduced by 10% what will be the new area ratio (S_T / S_A) in order to maintain take-off limit of C_{L_{max}}? 1 point
   (a) S_T / S_A = 0.03 x S_A / B
   (b) S_T / S_A = 0.05 x S_A / B
   (c) S_T / S_A = 0.1 x S_A / B
   (d) S_T / S_A = 0.3 x S_A / B

   No, the answer is incorrect. Explanation:
   Analysis of Flight

7. During a flight if the elevator is deflected with a certain configuration, how this will affect the stability of the aircraft: 1 point
   (a) Increase
   (b) Decrease
   (c) Unchanged
   (d) Cannot say

   No, the answer is incorrect. Explanation:
   Analysis of Flight

8. The static longitudinal stability of an airplane is provided by: 1 point
   (a) Lift from rear and horizontal tail
   (b) Product of the lift arm and pitch moment
   (c) Product of lift and horizontal tail
   (d) Cannot say

   No, the answer is incorrect. Explanation:
   Analysis of Flight

9. "Y" is a flying wing with a positive angle of attack which of the following arrangement is done: 1 point
   (a) CG is kept ahead of AC
   (b) CG is kept behind of AC
   (c) Canard surface is used
   (d) Relaxed controls is used

   No, the answer is incorrect. Explanation:
   Analysis of Flight

10. If the vertical tail was inverted and put below the horizontal tail of the aircraft at same distance from CD of aircraft as earlier, then by contribution to lateral stability will: 1 point
    (a) Increase
    (b) Decrease
    (c) Remain same
    (d) None of these

    No, the answer is incorrect. Explanation:
    Analysis of Flight

Due on 2020-09-18, 23:59:59 IST.