Assignment 08

The due date for submitting this assignment has passed. Due on 2019-10-23, 23:59 IST.
As per our records you have not submitted this assignment.

1) A pilot of passenger aircraft, during it’s final phase of approach for landing, realised malfunction in the elevator actuator. In the current scenario he can deflect elevator only 5% of the required deflection. Now assume you be the pilot, what should be your appropriate instruction to passengers, to increase chances of safe landing?

- Pray to God
- Prepare for crash landing
- Move towards the cockpit
- Gather at the aft part of the airplane

No, the answer is incorrect.
Score: 0
Accepted Answers:
Move towards the cockpit

2) In an UAV if the tail volume ratio increase from 0.3 to 0.6. Due to this change the longitudinal stability of UAV will?

- Increases
- Decreases
- Remain same
- Cannot say

No, the answer is incorrect.
Score: 0
Accepted Answers:
Increases
3) Which one is correct about neutral point of UAV?  
- Neutral point does not depend upon the location of centre of gravity  
- Neutral point depends upon the location of centre of gravity  
- Neutral point depend upon the location of centre of pressure  
- None of these  
No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
Neutral point does not depend upon the location of centre of gravity

4) During a flight if the elevator is deflected with a certain -ve angle, how this will affect the longitudinal stability of aircraft?  
- Increases  
- Decreases  
- Unchanged  
- Cannot say  
No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
Unchanged

5) In an aircraft without changing any other dimensions the tail setting angle is decrease by 6 degrees. Due to this change the longitudinal stability of aircraft will?  
- Increases  
- Decreases  
- Remain same  
- Cannot say  
No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
Remain same

6) Which condition holds to trim the Stable UAV at zero angle of attack?  
- $C_{m_x} \geq 0, C_{m_0} = 0$  
- $C_{m_x} \leq 0, C_{m_0} = 0$  
- $C_{m_x} < 0, C_{m_0} > 0$  
- $C_{m_x} < 0, C_{m_0} = 0$  
No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
$C_{m_x} < 0, C_{m_0} = 0$

7) For a static stability level ( slope of $C_m$ versus $C_L$ curve is $-0.10$ ) and the pitching moment coefficient at zero lift is equal to 0.05, the trim lift co-efficient will be?  
- 0.05  
- 0.01  
- 0.50
8) For a static stability level (slope of $C_m$ versus $C_L$ curve is $-0.01$) and the pitching moment coefficient at zero lift is equal to $0.05$ and centre of gravity of the air vehicle is located at $\frac{X_{cg}}{c} = 0.31$, stick fixed neutral point $\frac{X_{NP}}{c}$ will be?

- 0.00
- 0.41
- 0.10
- 0.31
- 0.21

No, the answer is incorrect. Score: 0
Accepted Answers: 0.41

9) Which condition holds to trim the Unstable UAV at negative angle of attack?

- $C_{m_e} \geq 0, C_{L_e} = 0$
- $C_{m_e} \leq 0, C_{L_e} = 0$
- $C_{m_e} > 0, C_{L_e} > 0$
- $C_{m_e} > 0, C_{L_e} = 0$

No, the answer is incorrect. Score: 0
Accepted Answers: $C_{m_e} > 0, C_{L_e} > 0$