Assignment 02

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment. Due on 2018-08-15, 23:59 IST.

1) Which placement of wing gives more longitudinal stability of aircraft? 1 point

- High wing
- Low wing
- Mid wing
- Cannot say

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

2) Which type propeller configuration gives less longitudinal stability of aircraft? 1 point

- Pusher type
- Tractor type
- Both option ‘Pusher type’ & ‘Tractor Type’ are correct
- Cannot say

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

3) In an aircraft the size of elevator is decreased keeping the vertical tail volume ratio constant, how will this affect the longitudinal stability of aircraft? 1 point

- Increase
- Decrease

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4) For a conventional aircraft the sign of $C_{m_{le}}$ and $C_{m_{e}}$ are respectively

- $-ve$, $-ve$
- $+ve$, $+ve$
- $-ve$, $+ve$
- $+ve$, $-ve$

No, the answer is incorrect.
Score: 0
Accepted Answers:
$-ve$, $-ve$

5) With the increase the horizontal tail volume ratio of the airplane, the elevator required for a given $C_{l_{crit}}$ will be

- Same
- Less
- More
- Cannot say

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

6) The static longitudinal stability of an airplane is provided by

- Vertical tail volume ratio
- Horizontal tail volume ratio
- Both option ‘Vertical tail volume ratio’ & ‘Horizontal tail volume’ ratio is correct.
- None of these

No, the answer is incorrect.
Score: 0
Accepted Answers:
Horizontal tail volume ratio

7) The two aircraft is geometrically similar but first one is bigger one in size and mass in compare with second one, which one will be more stable

- First one
- Second one
- For both the stability will be same
- Cannot say

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

8) The position of neutral point of aircraft is 0.5 meter from the leading edge of the wing and the location of centre of gravity of aircraft is 0.4 meter from the wing leading edge. The location of aerodynamic centre of aircraft from wing leading edge in metres will be
9) Which one is correct about the stable aircraft?

- Stick fixed neutral point always lie behind the manoeuvring point
- Stick fixed neutral point always lie ahead the manoeuvring point
- Stick fixed neutral point & manoeuvring point will be the same
- Stick free neutral point & manoeuvring point will be the same

No, the answer is incorrect.
Score: 0
Accepted Answers:
0.5

10) In flight measurement of neutral point, at neutral point

\[
\frac{dS_{\text{Tlim}}}{dC_{\text{Ltrim}}} = 0
\]

- \[\frac{dS_{\text{Tlim}}}{dC_{\text{Ltrim}}} = +ve\]
- \[\frac{dS_{\text{Tlim}}}{dC_{\text{Ltrim}}} = -ve\]
- Cannot say

No, the answer is incorrect.
Score: 0
Accepted Answers:
\[
\frac{dS_{\text{Tlim}}}{dC_{\text{Ltrim}}} = 0
\]