

Ch 3C, L3, 2H

Started: Jul 24 at 10:30am

Quiz Instructions

Select the most correct answer.

[Flag question: Question 1](#)

Question 11 pts

Which aerodynamic force opposes the rearward component of weight in a climb?

Group of answer choices

☐

weight

☐

thrust

☐

drag

☐

lift

[Flag question: Question 2](#)

Question 21 pts

What relative airspeed, power and AOA conditions produce the most noticeable left turning tendencies common to single-engine, propeller-driven aircraft?

Group of answer choices

☐

high power settings, high AOA, and high airspeed

☐

high airspeed, low power settings, and high AOA

☐

low airspeed, high power settings, and high AOA

☐

low AOA, low airspeed, and high power settings

[Flag question: Question 3](#)

Question 31 pts

Name three design elements that can be used to help offset left-turning tendencies

Group of answer choices

☐

rudder trim tab

☐

spoilers

☐

offset vertical stabilizer

☐

horizontally canted engine

☐

single slotted flaps

[Flag question: Question 4](#)

Question 41 pts

All else being equal, will two aerodynamically identical aircraft with different weights be able to glide the same distance over the ground?

Group of answer choices

☐

No

☐

Yes

[Flag question: Question 5](#)

Question 51 pts

What causes an airplane to turn?

Group of answer choices

☐

vertical component of lift

☐

centrifugal force

☐

horizontal component of lift

☐

centripetal force

[Flag question: Question 6](#)

Question 61 pts

If angle of bank and altitude are held constant, what can be done to increase the rate of turn?

Group of answer choices

☐

increase airspeed

☐

decrease airspeed

☐

decrease bank angle

[Flag question: Question 7](#)

Question 73 pts

Given a wings-level, 1G stall speed of 55 knots, use the chart provided to determine the stall speed under the following conditions.

Group of answer choices

Bank angle 30 degrees

[Choose]

Bank angle 45 degrees

[Choose]

Bank angle 75 degrees

[Choose]

[Flag question: Question 8](#)

Question 81 pts

True/False. Maneuvering speed increases with a decrease in weight

Group of answer choices

☐

True

☐

False

[Flag question: Question 9](#)

Question 91 pts

The total mechanical energy of an airplane in flight is the sum of what two types of energy?

Group of answer choices



Electrical energy from the battery, kinetic electrical energy from the alternator



Potential energy from altitude, kinetic energy from airspeed.



Kinetic energy from altitude, potential energy from airspeed.

[Flag question: Question 10](#)

Question 101 pts

Why is flying on the backside of the power curve discouraged?

Group of answer choices



Increasing airspeed can demand more power than the engine can supply



Reducing airspeed can demand more power than the engine can supply, or an unplanned reduction in power could result in an involuntary descent.



An unplanned increase in engine power could result in an involuntary descent

[Flag question: Question 11](#)

Question 111 pts

Which is the correct action to take if you are too low on an approach to landing and your airspeed is too slow?

Group of answer choices



Add power and decrease the pitch attitude.



Increase the pitch attitude and maintain the power setting.



Increase the pitch attitude and add power.

[Flag question: Question 12](#)

Question 121 pts

When below the glide path and flying at an excessive airspeed, what is the status of the three energy states?

Group of answer choices



Total energy is high, potential energy is ok, kinetic energy is high.



Total energy is ok, potential energy is ok, kinetic energy is low.



Total energy ok, potential energy is low, kinetic energy is high.

Not saved

Answers

Ch 3C, L3, 2H Results for Martin Freiwald

Score for this attempt: **12.33** out of 14

Submitted Jul 23 at 11:15am

This attempt took 3 minutes.

Correct answer

Question 1

1 / 1 pts

Which aerodynamic force opposes the rearward component of weight in a climb?



drag



lift



weight



thrust

Correct answer

Question 2

1 / 1 pts

What relative airspeed, power and AOA conditions produce the most noticeable left turning tendencies common to single-engine, propeller-driven aircraft?



low airspeed, high power settings, and high AOA



low AOA, low airspeed, and high power settings



high power settings, high AOA, and high airspeed



high airspeed, low power settings, and high AOA

Question 3

0.33 / 1 pts

Name three design elements that can be used to help offset left-turning tendencies



spoilers



rudder trim tab



offset vertical stabilizer



horizontally canted engine



single slotted flaps

Correct answer

Question 4

1 / 1 pts

All else being equal, will two aerodynamically identical aircraft with different weights be able to glide the same distance over the ground?



No



Yes

Variations in weight do not affect the glide ratio of an airplane, but the heavier aircraft will sink faster, and reach the ground sooner. To travel the same distance as the lighter aircraft, a higher

airspeed will need to be maintained by the heavier airplane. This higher airspeed, which corresponds to the best glide airspeed at that weight, increases ground speed and allows the heavier aircraft to cover the same horizontal distance even though its rate of descent is higher.

Correct answer

Question 5

1 / 1 pts

What causes an airplane to turn?



horizontal component of lift



vertical component of lift



centripetal force



centrifugal force

Correct answer

Question 6

1 / 1 pts

If angle of bank and altitude are held constant, what can be done to increase the rate of turn?



decrease airspeed



decrease bank angle



increase airspeed

Correct answer

Question 7

3 / 3 pts

Given a wings-level, 1G stall speed of 55 knots, use the chart provided to determine the stall speed under the following conditions.

Bank angle 30 degrees

59 knots

Bank angle 45 degrees

66 knots

Bank angle 75 degrees

110 knots

Correct answer

Question 8

1 / 1 pts

True/False. Maneuvering speed increases with a decrease in weight

☐

True

☒

False

Correct answer

Question 9

1 / 1 pts

The total mechanical energy of an airplane in flight is the sum of what two types of energy?

☐

Kinetic energy from altitude, potential energy from airspeed.



Potential energy from altitude, kinetic energy from airspeed.



Electrical energy from the battery, kinetic electrical energy from the alternator

Correct answer

Question 10

1 / 1 pts

Why is flying on the backside of the power curve discouraged?



An unplanned increase in engine power could result in an involuntary descent



Increasing airspeed can demand more power than the engine can supply



Reducing airspeed can demand more power than the engine can supply, or an unplanned reduction in power could result in an involuntary descent.

Correct answer

Question 11

1 / 1 pts

Which is the correct action to take if you are too low on an approach to landing and your airspeed is too slow?



Add power and decrease the pitch attitude.



Increase the pitch attitude and add power.



Increase the pitch attitude and maintain the power setting.

Wrong answer

Question 12

0 / 1 pts

When below the glide path and flying at an excessive airspeed, what is the status of the three energy states?



Total energy is ok, potential energy is ok, kinetic energy is low.



Total energy ok, potential energy is low, kinetic energy is high.



Total energy is high, potential energy is ok, kinetic energy is high.

Quiz Score: **12.33** out of 14

Ch 3C, L3, 2H Results for Martin Freiwald

Score for this attempt: **9.33** out of 14

Submitted Jul 23 at 11:12am

This attempt took 13 minutes.

Wrong answer

Question 1

0 / 1 pts

Which aerodynamic force opposes the rearward component of weight in a climb?

☐

drag

☒

lift

☐

thrust

☐

weight

Correct answer

Question 2

1 / 1 pts

What relative airspeed, power and AOA conditions produce the most noticeable left turning tendencies common to single-engine, propeller-driven aircraft?

☐

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☐

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low AOA, low airspeed, and high power settings



low airspeed, high power settings, and high AOA

Question 3

0.33 / 1 pts

Name three design elements that can be used to help offset left-turning tendencies



offset vertical stabilizer



spoilers



single slotted flaps



horizontally canted engine



rudder trim tab

Correct answer

Question 4

1 / 1 pts

All else being equal, will two aerodynamically identical aircraft with different weights be able to glide the same distance over the ground?



Yes

Variations in weight do not affect the glide ratio of an airplane, but the heavier aircraft will sink faster, and reach the ground sooner. To travel the same distance as the lighter aircraft, a higher airspeed will need to be maintained by the heavier airplane. This higher airspeed, which corresponds to the best glide airspeed at that weight, increases ground speed and allows the heavier aircraft to cover the same horizontal distance even though its rate of descent is higher.



No

Wrong answer

Question 5

0 / 1 pts

What causes an airplane to turn?



centripetal force



centrifugal force



horizontal component of lift



vertical component of lift

Correct answer

Question 6

1 / 1 pts

If angle of bank and altitude are held constant, what can be done to increase the rate of turn?



increase airspeed



decrease airspeed



decrease bank angle

Correct answer

Question 7

3 / 3 pts

Given a wings-level, 1G stall speed of 55 knots, use the chart provided to determine the stall speed under the following conditions.

Bank angle 30 degrees

59 knots ▼

Bank angle 45 degrees

66 knots ▼

Bank angle 75 degrees

110 knots ▼

Correct answer

Question 8

1 / 1 pts

True/False. Maneuvering speed increases with a decrease in weight

☐

True

☒

False

Correct answer

Question 9

1 / 1 pts

The total mechanical energy of an airplane in flight is the sum of what two types of energy?

☒

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Kinetic energy from altitude, potential energy from airspeed.



Electrical energy from the battery, kinetic electrical energy from the alternator

Wrong answer

Question 10

0 / 1 pts

Why is flying on the backside of the power curve discouraged?



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1 / 1 pts

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Increase the pitch attitude and maintain the power setting.



Increase the pitch attitude and add power.

Wrong answer

Question 12

0 / 1 pts

When below the glide path and flying at an excessive airspeed, what is the status of the three energy states?



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