

# Honolulu Soaring

## Pre-Solo Knowledge Test

Name \_\_\_\_\_

Date \_\_\_\_\_

Instructor \_\_\_\_\_

This is an open book test. Pick the most correct answer or answer as fully as possible.

1. The glider is in a turn to the left. The tail of the yaw string points to the left. This means
  - a. The glider is skidding the turn. Use more left rudder.
  - b. The glider is skidding the turn. Use less left rudder.
  - c. The glider is slipping the turn. Use more rudder.
  - d. The glider is slipping the turn. Use more left rudder.
  
2. The glider is slipping a left turn. If the pilot stalls the glider, which is most likely
  - a. The left wing (low) will stall first. The glider is likely to enter a spin to the left.
  - b. The right wing (top) will stall first. The glider is likely to enter a spin to the left.
  - c. The right wing (top) will stall first. The glider is like to enter a spin to the right.
  - d. The glider will stall normally. There will be no tendency to spin.
  
3. Which action is necessary to make the aircraft turn?
  - a. Change the direction of lift.
  - b. Yaw the plane.
  - c. Increase the angle of attack.
  - d. Change the thrust vector.
  
4. The purpose of a side slip is to
  - a. To lose extra altitude while maintaining speed, usually when too high on final approach.
  - b. To correct for a crosswind when landing or taking off.
  - c. To lose extra airspeed, usually when too fast on final approach.
  - d. Both a. and c.
  
5. The pilot is flying final approach into a strong headwind and realizes he is low. He should
  - a. Slow to best glide speed to cover the most distance with the least altitude loss.
  - b. Close spoilers and slow to fly best glide speed.
  - c. Close the spoilers and maintain speed.
  - d. Close the spoilers and lower nose to increase penetration into the wind.

6. A student pilot's solo endorsement is good for
  - a. 60 days.
  - b. 90 days
  - c. 120 days
  - d. Two years.
  
7. Who is responsible for determining if a glider is safe to fly?
  - a. The owner of the glider.
  - b. The mechanic who worked on the glider
  - c. The pilot in command.
  - d. The chief pilot.
  
8. If you lose sight of the towplane on tow, what should you do?
  - a. Lower the glider's nose so you can see the towplane.
  - b. Lower the glider's nose and use spoilers to get back in position without getting slack.
  - c. Wait for the towplane to come back into position.
  - d. Release the towrope immediately.
  
9. How do you get slack out of the towrope?
  - a. Gradually pull up to slow down and remove slack.
  - b. Use the rudder to yaw the glider back and forth to slow down and create drag.
  - c. Do nothing. Just wait for the slack to come out.
  - d. Either yaw away from the rope or open spoilers to create drag.
  
10. What is your pre-landing checklist and why do you use it?

11. What are the speeds for your glider?

	<u>Solo</u>	<u>Dual</u>
Stall	_____	_____
Min. Sink	_____	_____
Best Glide	_____	_____
Maneuvering	_____	_____
Redline	_____	_____

12. List the signals (ground and air). Use the back of this sheet of paper.
13. What are the ridge rules? (There are 4 SSA rules.)
  
14. What is necessary for ridge lift to form? (Give the wind speed & direction).

15. Is it okay to fly on the downwind side of the ridge? Explain your answer.
16. What does aft c.g. mean and why is it dangerous?
17. What does this mean –“ Min. weight aft pilot 89 lb./frwd. pilot 220#”?
18. List at least four things that increase the stall speed of a glider.
19. What makes a glider spin? How do you recover?
20. What is a spiral dive? How does it differ from a spin? How do you recover?
21. The rope breaks below pattern altitude. What are your immediate actions?
22. A good visual indicator of a thermal is
- A sharply outlined cumulus cloud with a concave base
  - A fragmented cumulus cloud with a concave base
  - Lots of cumulus clouds with sky cover broken to overcast
  - Rapidly growing cumulus clouds over the ocean
23. The airspace overlying Dillingham Airfield is Class(s) \_\_\_\_\_ from the surface up to \_\_\_\_\_ and then it is Class \_\_\_\_\_. The cloud clearance & visibility for Class \_\_\_\_\_ is \_\_\_\_\_ and for Class \_\_\_\_\_, \_\_\_\_\_.

24. In an emergency downwind landing, ground speed will be faster at touch down, the ground roll longer, and less control effectiveness during the ground roll. True or False?

25. Hyperventilation can best be overcome by

- a. Use supplemental oxygen
- b. Breathe rapidly
- c. Breathe slowly
- d. Take tranquilizers

26. What is speed to fly? Give two examples.

27. What is wind gradient? What effect would it have on a glider during landing?

28. On a high tow, why does the towplane take the glider upwind from the runway?

29. How would you find where the restricted areas are on our ridge?

- a. Look on a sectional chart.
- b. Look in the Airport Facility Directory.
- c. Look in the FAR's.
- d. Look in the AIM.

30. What causes a glider to stall?

31. Explain wake turbulence?

32. On a normal tradewind day, the towrope breaks, what would you expect to do at 200 feet \_\_\_\_\_, 400 feet \_\_\_\_\_, 600 feet \_\_\_\_\_, 800 feet \_\_\_\_\_.

33. You are on base leg and realize you are too high. What can you do to descend?

34. Why would you steer the towplane?

35. How would you pick out a suitable off-field landing site? (Use the back of this page).
36. What do you do in any emergency?
37. Why does the aeronautical chart say to remain 3,000' away from the satellite tracking station?
38. What is the gross weight of your glider?
39. Draw the pattern for Runway 8. (Use the back of this page.)
40. Draw the location of the toilet bowl. (Use the back of this page.) How high must you be AGL to fly over the toilet bowl?
41. When is Dillingham Airfield open for civilian aircraft?
42. When is the pilot required to use supplemental oxygen?
- a. Above 10,000 feet
  - b. When you're above 12,000 feet for more than 30 minutes
  - c. When you're above 12,500 for more than 30 minutes
  - d. Above 15,000 feet
43. What are the currency requirements for carrying passengers?
- a. Three flights within the last 90 days, in the same category aircraft
  - b. Three flights within the last 90 days, in any category aircraft
  - c. Three flights within the last 24 calendar months
  - d. Three flights within the last 90 days, in either gliders or airplanes
44. What documents must be inside the glider? (answer on the back of this page)
45. The windsocks at Dillingham register a maximum wind speed of \_\_\_\_\_.
46. How high must you remain at all times when ridge flying on top of the ridge \_\_\_\_\_?
47. You intend to fly the ridge. What is the minimum altitude you can release from tow in good ridge lift?
48. Why is it good practice to be cautious about flying downwind from the runway? Why is it especially important in a strong wind? (Use the back of this page.)

{revised August, 2005}