

# **Honolulu Soaring**

at Dillingham Airfield (HDH)

## **Renters' Knowledge Test**

(Revised: 2-Sept-2005)

Name : \_\_\_\_\_

Date : \_\_\_\_\_

Pilot Cert # : \_\_\_\_\_

Instructor : \_\_\_\_\_

Date Reviewed : \_\_\_\_\_

**This is an open book test.** You may use any soaring book or other reference, along with Honolulu Soaring's "Operating Procedures – Students and Renters". Pick the most correct answer or answer as fully as possible. **HDH** is the Airport Identifier for Dillingham Airfield.

1. What causes a glider to stall ?
2. List 5 things that cause a glider to stall at a higher speed than the published stall speed.
3. What causes a glider to spin ? What is the correct procedure to recover from a spin?
4. Is it okay to practice stalls on the ridge? Yes \_\_\_\_\_ No \_\_\_\_\_
5. What would happen if a glider pilot entered a spin, applied opposite rudder to recover, but did not use any forward stick?

6. Is it possible for a glider to stall with its nose below the horizon? Yes\_\_\_\_\_ No\_\_\_\_\_
7. Which way would the glider spin if the pilot stalled it during a slipping turn to the left?
8. If the pilot is turning to the right and the tail of the yaw **string** is off to the right side, what coordination mistake is the pilot making? How should he or she correct it?
9. Is it okay to fly over the "toilet bowl" ? Yes\_\_\_\_\_ No\_\_\_\_\_
10. What is the **maximum wind speed** registered by the windsocks at HDH ? \_\_\_\_\_
11. Honolulu Soaring requires renters of its aircraft to maintain \_\_\_\_\_ feet AGL while flying the ridge.
12. Is it okay to fly along the face of the ridge below 1,000 MSL? Yes\_\_\_\_\_ No \_\_\_\_\_
13. Except in an emergency situation, or a rope-break, the **minimum** altitude to release from tow is \_\_\_\_\_ feet.
14. What makes a glider turn?
- Change the direction of lift.
  - Yaw the plane.
  - Increase the angle of attack.
  - Change the thrust vector.
15. What is the purpose of a side slip, and when would a pilot use it ?
16. What is the purpose of a forward slip, and when would a pilot use it ?
17. The pilot is flying final approach into a strong headwind and realizes he is low. He should
- Slow to best glide speed to cover the most distance with the least altitude loss.
  - Close spoilers and slow to minimum sink speed to lose the least altitude.
  - Close the spoilers and maintain pattern speed.
  - Close the spoilers and lower nose to increase penetration into the wind.

18. A student pilot's solo endorsement is good for

- a. 60 days.
- b. 90 days
- c. 120 days
- d. Two years.

19. 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.

20. 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 tow-rope immediately.

21. How do you get slack out of the tow-rope ?

- 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.

22. What is your pre-landing checklist and why do you use it ?

23. What are the **speeds** for the glider you rent?

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

24. List the signals (ground and air). (Use the back of this sheet of paper).

25. What are the "ridge rules" ? (There are 4 SSA rules.)
26. What is necessary for ridge lift to form ? (Give the wind speed & direction).
27. Is it okay to fly on the downwind side of the ridge ? Explain your answer.
28. What does **aft c.g.** mean; and why is it dangerous?
29. The weight and balance placard on a 2-33 says: " Min. weight aft pilot 189 lb./frwd. pilot 100#".  
In plain English, what does it mean ? What is the significance of this information on the placard ?
30. What is a spiral dive ? How does it differ from a spin ? How do you recover ?
31. The rope breaks below pattern altitude. What are your immediate actions ?
32. A good visual indicator of a thermal is
- a. A sharply outlined cumulus cloud with a concave base
  - b. A fragmented cumulus cloud with a concave base
  - c. Lots of cumulus clouds with sky cover broken to overcast
  - d. Rapidly growing cumulus clouds over the ocean

33. The airspace overlying Dillingham Airfield is Class \_\_\_\_\_ from the surface up to \_\_\_\_\_ and then it is Class \_\_\_\_\_.
- The cloud clearance & visibility for Class \_\_\_\_\_ is \_\_\_\_\_; and for Class \_\_\_\_\_, it is \_\_\_\_\_.
34. 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 ?
35. What is the maximum wind speed for making a safe downwind landing ?
36. What is the formula for deciding the airspeed to fly the pattern ?
37. What is speed to fly ? Give three examples.
38. What is wind gradient ? What effect would it have on a glider during landing ?
39. When a glider pilot tows to a high altitude, why does the towplane take the glider upwind from the runway ?
40. Where would a pilot look to find the location of the restricted areas on our ridge ?
- Look on a sectional chart.
  - Look in the Airport Facility Directory.
  - Look in the FAR's.
  - Look in the AIM.
41. What is wake turbulence ? Is the wake turbulence behind a large aircraft dangerous, and if so, why ?
42. What is the wind speed and direction on a normal trade wind day?

43. Taking off on a normal tradewind day, what action could a pilot take if the tow-rope broke at the following altitudes:

200 feet \_\_\_\_\_

400 feet \_\_\_\_\_

600 feet \_\_\_\_\_

800 feet \_\_\_\_\_

44. A pilot is on the base leg and realizes the glider is too high. What can he or she do ?

45. List 3 reasons the [glider](#) pilot would 'steer' the towplane.

46. How would you pick out a suitable off-field landing site ? (Use the back of this page).

47. What do you do in any emergency ?

48. Why does the aeronautical chart say to remain 3,000-ft away from the satellite tracking station ?

49. What is the gross weight of the glider you usually rent from Honolulu Soaring?

50. Draw the pattern for Runway 8.

51. Draw the location of the "toilet bowl".

52. Dillingham Airfield is open for civilian aircraft between \_\_\_\_\_ & \_\_\_\_\_.
53. When is a pilot required to use supplemental oxygen?
- Above 10,000 feet
  - When you're above 12,000 feet for more than 30 minutes
  - When you're above 12,500 for more than 30 minutes
  - Above 15,000 feet
54. What are the currency requirements for carrying passengers ?
- Three flights within the last 90 days, in the same category aircraft
  - Three flights within the last 90 days, in any category aircraft
  - Three flights within the last 24 calendar months
  - Three flights within the last 90 days, in either gliders or airplanes
55. What documents must be inside the glider ?
56. Why is it good practice to be cautious about flying downwind from the runway ? Why is it especially important in a strong wind?
57. When you release from tow at 1,000 feet MSL on the ridge, what speed do you fly?
58. After releasing from tow at 1,000 feet MSL, at what altitude above the ground would you slow to minimum sink speed ? Explain.
59. Draw the two possible patterns for Runway 26, include the location of the drop zone for each pattern.