

*Kadena Aero Club's*

# **PRE-SOLO WRITTEN EXAM**

## **INTRODUCTION:**

FAR 61.87(b) specifies that prior to conducting solo flight, a student pilot must demonstrate satisfactory aeronautical knowledge on a knowledge test. This is administered/reviewed by the student's authorized instructor and meets the requirements of 61.87(b). The test must address the student pilot's knowledge of applicable sections of FAR Parts 61 and 91; airspace rules and procedures for the airport where the solo flight will be performed; flight characteristics and operational limitations for the make and model of aircraft to be flown. Student pilots should understand that the pre-solo written exam is a separate exam and is different from [and in addition to] the FAA Recreational or Private Pilot knowledge tests.

## **EXAM PROCEDURES AND INSTRUCTIONS:**

This pre-solo written exam will be given to a Student Pilot (SP) in anticipation of solo flight. This is an "open-book" exam. Answers to most questions can be found in either the current FAR/AIM or the [STC] POH (Pilot's Operating Handbook/Owner's Manual) for the aircraft to be flown. Each of the questions in this exam requires the SP to supply an answer rather than choose the correct answer (as is in most FAA tests). Consequently, some research and "digging" will be necessary. After the SP completes the exam, it will be reviewed with the SP's instructor. Any incorrect answers will be discussed and corrected.

\*This is not a pass/fail exam. All questions address important areas that are critical to safe, legal and enjoyable flying. It is most important that the information be known and understood.

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**STUDENT NAME**

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**ADMINISTERED BY (CFI)**

**DATE EXAM COMPLETED:** \_\_\_\_\_

1. What forms do you need to complete prior to a flight?  
\_\_\_\_\_
2. What three documents must you have in your possession to solo as a student?  
\_\_\_\_\_
3. How long will the solo endorsement given by your instructor last? (14 CFR § 61.87)  
\_\_\_\_\_
4. What are your weather minimums for a solo flight as a student pilot?  
\_\_\_\_\_
5. Who has final authority/responsibility for safe operation of the AC when you fly solo?  
\_\_\_\_\_
6. If an ultralight is converging with our C172, who has the right of way?  
\_\_\_\_\_
7. Which way do converging aircraft turn to avoid each other? \_\_\_\_\_
8. When are you permitted to deviate from an ATC instruction?  
\_\_\_\_\_
9. ATC replies to you with instructions that you don't understand. What do you do?  
\_\_\_\_\_
10. List your MSAs flying over *congested & other-than-congested* areas. (14 CFR § 91.119)  
*Congested:* \_\_\_\_\_  
*Other-than-congested:* \_\_\_\_\_
11. What altitude must you recover no lower than for maneuvers such as stalls? \_\_\_\_\_
12. Describe which VFR cruising altitudes to use when flying in the following scenarios:  
*NE to Yoron:* \_\_\_\_\_ *SSW to Kumejima:* \_\_\_\_\_
13. How many hours are required between consuming alcohol and flying? \_\_\_\_\_
14. You were at a party last night, and your BAC is .05%. *\*It was a good party, apparently.\**  
It has been 10 hours since you last had a drink. Can you fly? Explain.  
\_\_\_\_\_  
\_\_\_\_\_
15. What is the minimum fuel requirement per the FAA for Day VFR flight? The SOP?  
*Fuel Req. per FAA:* \_\_\_\_\_ *Fuel Req. per SOP:* \_\_\_\_\_

16. What is the TPA (traffic pattern altitude at RODN)? \_\_\_\_\_

17. List each meaning for the following light gun signals (both in air and on ground).

| <b>SIGNAL</b>                    | <b>IN-FLIGHT</b> | <b>ON-GROUND</b> |
|----------------------------------|------------------|------------------|
| <i>STEADY GREEN</i>              |                  |                  |
| <i>FLASHING GREEN</i>            |                  |                  |
| <i>STEADY RED</i>                |                  |                  |
| <i>FLASHING RED</i>              |                  |                  |
| <i>FLASHING WHITE</i>            |                  |                  |
| <i>ALTERNATING<br/>RED/GREEN</i> |                  |                  |

18. What leg of the traffic pattern must we report to TWR before entering? \_\_\_\_\_

19. What is the lost comms (NORDO) procedure for RODN?

\_\_\_\_\_

\_\_\_\_\_

20. What are the requirements for Class D entry?

\_\_\_\_\_

21. What is necessary to operate in Class B legally as a student? Required equipment?

\_\_\_\_\_

\_\_\_\_\_

22. Can you fly into 'Restricted' airspace, like Camp Courtney? (*Circle answer*) YES / NO

23. You are flying to Kumejima (ROKJ) on a cross country flight. Can you pass through W-174 (Warning Area, surface to FL150)? (*Circle answer*) YES / NO

24. What is the base of Naha PCA over Nago Bay and Whitebeach practice areas?

Describe where the Nago Bay PCA boundary is.

PCA Floor Nago Bay: \_\_\_\_\_ PCA Floor Whitebeach: \_\_\_\_\_

PCA Boundary at Nago Bay: \_\_\_\_\_

25. What is the fuel capacity of both the C172-S and C172-P?

S-model Max Usable: \_\_\_\_\_ P-model Max Usable: \_\_\_\_\_

26. What is the max gross weight of our aircraft in "normal" category? \_\_\_\_\_

27. Define and list the following speeds for your aircraft:

$V_{so}$ : \_\_\_\_\_

$V_s$ : \_\_\_\_\_

$V_x$ : \_\_\_\_\_

$V_y$ : \_\_\_\_\_

$V_a$  (at 2200 lbs): \_\_\_\_\_

$V_{fe}$  (10°, and 20-30°): \_\_\_\_\_

$V_{no}$ : \_\_\_\_\_

$V_{ne}$ : \_\_\_\_\_

28. What is your airplane's best glide speed? When is it used?

\_\_\_\_\_

29. What is the maximum RPM of our airplane's engine? \_\_\_\_\_

30. What would happen to the fuel indicators if all electricity in the aircraft was lost?

\_\_\_\_\_

31. List three characteristics of the Redhawk's engine (i.e. the name, how it's cooled, type of fuel, etc.).

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

32. Fill in the spin recovery acronym, and elaborate each step.

*P* \_\_\_\_\_

*A* \_\_\_\_\_

*R* \_\_\_\_\_

*E* \_\_\_\_\_

33. List the procedure for a go-around.

\_\_\_\_\_

\_\_\_\_\_

34. It is a very hot summer day in Okinawa (35°C). The ATIS reports Density Altitude as 2,500' MSL (RODN's elevation is 143' MSL). Is the ground roll/total takeoff distance going to be shorter or longer because of this? Explain.

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35. The total takeoff distance from the previous question is 1,900'. You have been cleared to takeoff 23L at Taxiway D. On the takeoff roll, you are about to pass Taxiway C and still haven't reached Vr. (*The distance between D and C is ~1,800'.*) What do you do?

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36. Describe 'wake turbulence' and how to avoid it.

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