

# Advantage Aviation Inc.

## PRE-SOLO KNOWLEDGE TEST

Student: \_\_\_\_\_

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

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

Date of Review: \_\_\_\_\_

Student Acknowledgement of Review: \_\_\_\_\_

### **FAR PART 61**

1. What four things must you have with you in order to act as pilot in command during solo flights? \_\_\_\_\_  
\_\_\_\_\_
2. How long is your student pilot certificate valid for? \_\_\_\_\_  
\_\_\_\_\_
3. How long is your medical certificate valid for? \_\_\_\_\_  
\_\_\_\_\_
4. On any given day, what is the latest time you can solo? \_\_\_\_\_  
\_\_\_\_\_
5. Are you allowed to carry passengers on solo flights? \_\_\_\_\_
6. What additional limitations to your solo privileges are part of your solo endorsement? \_\_\_\_\_  
\_\_\_\_\_
7. Under what conditions can you fly solo in Class B airspace? \_\_\_\_\_  
\_\_\_\_\_

### **FAR PART 91**

8. Under what conditions, during your solo flight, may you deviate from any FARs? \_\_\_\_\_  
\_\_\_\_\_
9. Excluding preflighting the airplane, how do you determine an aircraft is airworthy prior to solo flight? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
10. You have had one glass of wine at 11:00pm. Your solo flight is scheduled for 8:00am the next morning. Can you legally fly solo? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

11. Are you required to obtain a weather briefing prior to a solo flight? If so when and where can you get the briefing from? \_\_\_\_\_

\_\_\_\_\_

12. What is the legal minimum safe altitude when flying over a congested area? \_\_\_\_\_

13. On your way back from a solo flight to Palo Alto your communication radios fail. The tower is operational. What do you do? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

14. Provide an example of a TFR that may be issued affecting flights at Palo Alto Airport. \_\_\_\_\_

\_\_\_\_\_

15. While in flight, what are the meanings of the following light gun signals.

Steady Red \_\_\_\_\_

Steady Green \_\_\_\_\_

Flashing Green \_\_\_\_\_

16. What is the minimum fuel reserve required for day VFR operations? \_\_\_\_\_

\_\_\_\_\_

17. What are the day VFR weather minimums to operate in class G, E and D airspace? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

18. What documents must be on board the aircraft at all times? \_\_\_\_\_

\_\_\_\_\_

19. After the run up, while getting ready to ask the tower for a take off clearance, you realize that the attitude indicator is still not showing a level attitude. More than 5 minutes have passed since starting the engine and, therefore, you assume the instrument is inoperative. Is the airplane legal to fly? What should you do? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

20. Unless otherwise instructed by ATC, what transponder code should you squawk? \_\_\_\_\_

21. What are the required aircraft inspections required for VFR flight? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

22. Returning from a solo flight you find out there is a disabled aircraft on the runway at KPAO. The tower advises they aren't sure how long the runway will be closed. What will you do? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**PALO ALTO AIRPORT OPERATIONS**

23. List all radio frequencies associated with your home airport, including for the fuel truck. \_\_\_\_\_  
\_\_\_\_\_

24. Draw the traffic pattern for each runway at Palo Alto airport, labeling each leg and the proper entry and departure points. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

25. Describe the noise abatement procedure for the Palo Alto airport. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

26. When flying to the coast, describe the available VFR departure procedures. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

27. Name three charted reporting points that can be used to inform Palo Alto tower of your position when inbound from either the east or the west. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

28. Upon contacting Palo Alto tower while inbound to the airport, they reply with "Aircraft calling Palo Alto tower, Stand by". Are you permitted to enter the Class D airspace? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

29. Name two common practice areas for performing maneuvers. Also, what are the recommended altitudes to never be below while performing any maneuver?

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30. Name any two examples of how your flight instructor has taught you to mitigate any risk encountered during a routine flight to a practice area or airport. \_\_\_\_\_

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### **AERODYNAMICS**

31. What effect does the bank angle have on the stall speed if the airplane is being maintained at a constant altitude? \_\_\_\_\_

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32. Describe the Power-off stall recovery technique to be used for your airplane. \_\_\_\_\_

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33. Why is rudder necessary in a turn? \_\_\_\_\_

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34. What are the published maneuvering and best glide speeds for your airplane. \_\_\_\_\_

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### **WEATHER**

35. Runway 31 is in use. The reported wind from the ATIS is 340 @ 12kts. What is the crosswind component and is it within your logbook limitation? (If no limitation has been entered use the club by laws limitations) \_\_\_\_\_

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36. Runway 31 is in use. METAR KPAO 1547Z 03012KT 10SM SCT 040 15/13 A30.01. What is the crosswind component? \_\_\_\_\_

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37. What is windshear and why is it dangerous? \_\_\_\_\_

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38. How do you recognize windshear from the cockpit when it is happening and what can you do about it? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**AIRCRAFT SYSTEMS GENERAL**

39. When you drain the fuel sumps you discover clear liquid in the tester. What could this be and is it acceptable for use in the airplane? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

40. What happens to the engine on your airplane if you switch off the master switch? \_\_\_\_\_  
\_\_\_\_\_

41. How will you know if the alternator has failed while flying, and what action should you take? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

42. How many times should you attempt to reset a circuit breaker if it pops? \_\_\_\_\_  
\_\_\_\_\_

43. During the run-up, If the engine is rough during the magneto check, what action should you take to restore smooth operation? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

44. Describe when a flooded start procedure would be necessary and how you would perform it. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**EMERGENCIES**

45. What should you do in the event of an electrical fire in flight? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

46. What should you do if an engine fire occurs during engine start? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

47. What should you do if the engine fails when not near an airport? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**ADVANTAGE AVIATION CLUB RULES**

48. Can you do touch and go's at Palo Alto while flying solo? \_\_\_\_\_

49. Can you fly at night? \_\_\_\_\_

50. You come to the club for a solo flight. No instructor is present, only the front desk person is there. Can you go fly solo? Why? \_\_\_\_\_  
\_\_\_\_\_

51. You are at the club and want to fly solo. An instructor is present, checks your logbook, but tells you he/she is going on a flight or leaving the club. Can you go on your solo flight? \_\_\_\_\_  
\_\_\_\_\_

52. Who must you check with prior to any solo operations? \_\_\_\_\_

53. Under what conditions should you pull the airplane out of its parking spot prior to engine start? \_\_\_\_\_  
\_\_\_\_\_

54. Can you attempt to "angle" the airplane into its spot while taxiing in? \_\_\_\_\_  
\_\_\_\_\_

55. If mechanical irregularities are noted during a preflight inspection, to whom should you report them and when? \_\_\_\_\_  
\_\_\_\_\_

56. If the hobbs meter in the airplane shows something other than the entry in the tach book what should you do? \_\_\_\_\_  
\_\_\_\_\_

57. What part(s) of this METAR, KPAO 2147Z 36012KT 8SM 06SCT 100BKN 20/12 A3012 makes it so you can't fly solo according to club rules? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

58. When must covers or window shades be re-installed on the airplane? \_\_\_\_\_  
\_\_\_\_\_

# STUDENT PILOT SINGLE ENGINE CHECKOUT FORM

**Aircraft Make & Model:** \_\_\_\_\_

**AIRSPEEDS** Knots/Miles per hour (circle one)

V<sub>S</sub>: \_\_\_\_\_

V<sub>SO</sub>: \_\_\_\_\_

Rotate V<sub>R</sub>: \_\_\_\_\_

V<sub>Y</sub>: \_\_\_\_\_

V<sub>X</sub>: \_\_\_\_\_

V<sub>A</sub>: \_\_\_\_\_

Normal Landing: \_\_\_\_\_

Max Window Open: \_\_\_\_\_

Cruise climb: \_\_\_\_\_

V<sub>FE</sub>: \_\_\_\_\_

Short field approach: \_\_\_\_\_

Best glide: \_\_\_\_\_

Go around: \_\_\_\_\_

V<sub>NE</sub>: \_\_\_\_\_

Max crosswind: \_\_\_\_\_

**ENGINE**

Manufacturer: \_\_\_\_\_

Horsepower: \_\_\_\_\_

Model: \_\_\_\_\_

Type: \_\_\_\_\_

**OIL**

Absolute minimum: \_\_\_\_\_

Maximum: \_\_\_\_\_

Minimum for operation: \_\_\_\_\_

Grade: \_\_\_\_\_

**FUEL**

Grade: \_\_\_\_\_

Max Capacity (total): \_\_\_\_\_

Max Capacity (usable): \_\_\_\_\_

Color: \_\_\_\_\_

Max total cap. at tabs: \_\_\_\_\_

Max usable cap. at tabs: \_\_\_\_\_