



## Pre-Solo Written Exam (ASEL)

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

### **Introduction**

FAR 61.87(b) specifies that prior to conducting solo flight, a student pilot must demonstrate satisfactory aeronautical knowledge on a knowledge test that is administered and reviewed by the students authorized instructor and meets the requirements of the section.

The test must address the student pilot's knowledge of applicable sections of FAR Parts 61 and 91, Piper Cherokee or Warrior information manual (located on [kpsair.com](http://kpsair.com) under flight school), airspace rules and procedures for the airport where the solo flight will be performed and 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 in anticipation of solo flight. This is an "open book" exam. Answers to most questions can be found in the current FAR/AIM or the Pilot's Operating Handbook/Owners Manual for the aircraft to be flown. Each of the questions in this exam requires the Student Pilot to supply an answer rather than choose the correct answer as in most FAA tests. Consequently, some research and "digging" will be necessary. After the Student Pilot completes the exam, it will be reviewed with the student's instructor. Any incorrect answers will be discussed and corrected.

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.

## **General Questions**

1. What personal documents and endorsements are you required having before you fly solo?
2. What are your limitations as a student pilot regarding carrying of passengers or cargo and flying for compensation or hire?
3. Who has the final authority and responsibility for the operation of the aircraft when you are flying solo?
4. What are your weather minimums?
5. Discuss what preflight action concerning the airport and aircraft performance is specified in the regulations for a local flight.
6. What are the general requirements pertaining to the use of safety belts and shoulder harnesses?
7. What is the minimum fuel reserve for day VFR flight and on what cruise speed is the fuel reserve based?
8. What aircraft certificates and documents must be on board when you are flying solo?

9. Discuss the right-of-way rules regarding overtaking another aircraft, approaching head-on and another aircraft converging from the side.

10. Who has the right-of-way when two aircraft are on final approach to land at the same time?

11. A transponder with Mode C is required at all times in all airspace at and above ft MSL, excluding that airspace at and below ft AGL.

12. Except when necessary for takeoffs and landings, what are the minimum safe altitudes when flying over congested and other than congested areas?

13. If the altimeter setting is not available at an airport, what setting should you use before departing on a local flight?

14. When practicing steep turns, stalls and maneuvering during slow flight, the entry altitude must allow a recovery to be completed no lower than how many feet AGL?

15. When is a go-around appropriate?

16. IAW FARs you may not fly as pilot in command of a civil aircraft within hours after consumption of any alcoholic beverage or while you have % or more alcohol in your blood.

17. Provide visibility and cloud clearance requirements for the following airspace.

18. IAW FARs, Can a student pilot request a special VFR clearance in less than VFR conditions? Explain your answer.

19. During engine run-up, you cause rocks, debris and propeller blast to be directed toward another aircraft or person. Could this be considered careless or reckless operation of an aircraft? Why or why not?

20. What altitudes should you use when operating VFR in level cruising flight at more than 3000 feet AGL and what determines those altitudes?

21. What is the emergency frequency?

## Aircraft Questions

1. List the minimum equipment and instruments that must be working properly in your aircraft for day VFR flight.

2. Fill in the V-speed definitions and the corresponding speed for your training airplane. Definition  
Speed

V<sub>so</sub>

V<sub>s</sub>

V<sub>x</sub>

V<sub>y</sub>

V<sub>fe</sub>

V<sub>a</sub>

V<sub>no</sub>

V<sub>ne</sub>

3. What is the best glide speed for your training airplane? MPH/KIAS

4. Describe the changes in V<sub>a</sub> with changes in the gross weight of an aircraft.

5. Describe any limitations on flap use in your training airplane.

6. Under what circumstances should you use carburetor heat?

7. Under what circumstances would a spin occur in your training aircraft?

8. Describe the spin recovery procedures for your training aircraft.

9. What is the stall speed of your training airplane in a 60 degree bank with flaps up?

### **Airport/Airspace**

1. What are the traffic patterns for each runway at your home airport? What is the MSL altitude for the traffic pattern?

2. How do you enter and exit the traffic pattern at your airport. What radio communications are required?



9. What is the meaning of each of the following ATC light signals?

<b>Color and Type</b>	<b>Ground</b>	<b>Air</b>
Steady Green		
Flashing Green		
Steady Red		
Flashing Red		
Flashing White		
Alternating Red/Green		

10. What aircraft equipment and student pilot authorizations are required for a student pilot to fly solo in Class B airspace?

11. A magenta dashed line surrounds certain uncontrolled airports. What does this indicate and what is its significance to VFR pilots?

12. On a sectional, what does a dashed blue line around an airport indicate.

13. What are the minimum visibility and ceiling requirements for VFR flight in Class C airspace?



14. Prior to taking the runway at an uncontrolled airport, it is recommended to maneuver the airplane as needed to view the final approach area to confirm that there is no other landing traffic. At an airport with a control tower is this still a recommended maneuver? Explain your answer.

15. What is the standard direction of turn in the traffic pattern? Give an example of a visual display indication a non-standard traffic pattern

16. What is the purpose of CTAF?

17. You have called KPNS Approach prior to entering and the controller tells you "N55151, Standby." Are you now allowed to enter the airspace without any further instructions? Explain.

18. Describe the airspace around KPNS. Explain how you can use navigation equipment and/or ground reference points to identify the airspace boundaries.

19. Define the following Airport markings:

