

# STUDENT PRE-SOLO WRITTEN TEST

## GENERAL QUESTIONS

1. What personal documents and endorsements are you required to have before you fly solo? (FAR 61.87)  
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 .....
2. What are your student pilot limitations regarding carriage of passengers or cargo and flying for compensation or hire? (FAR 61.89)  
 .....  
 .....
3. Explain student pilot limitations concerning visibility and flight above clouds. (FAR 61.89)  
 .....  
 .....
4. Who has the final authority and responsibility for the operation of the aircraft when you are flying solo? (FAR 91.3)  
 Tower     Pilot     Instructor     Mechanic
5. Discuss what preflight action concerning the airport and aircraft performance is specified in the regulations for a local flight.  
 .....  
 .....
6. 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 operations of an aircraft?  
 YES     NO     DEPENDS
7. You may not fly as pilot of a civil aircraft within \_\_\_\_\_ hours after consumption of any alcoholic beverage, or while you have \_\_\_\_\_% by weight or more alcohol in your blood.
8. What are the general requirements pertaining to the use of safety belts and shoulder harnesses?  
 .....  
 .....
9. What is the minimum fuel reserve for day VFR flight, and on what cruise speed is the fuel reserve based?  
 .....
10. A transponder with Mode C is required at all times in all airspace at and above 10,000 feet MSL, excluding that airspace at and below \_\_\_\_\_ feet AGL.
11. What aircraft certificates and documents must be on board when you are flying solo? (FAR 91.203)  
 .....  
 .....
12. No person may operate an aircraft so close to another aircraft as to create a(n).....

13. Who has the right-of-way when two aircraft are on final approach to land at the same time? (FAR 9 1.113)  
 .....  
 .....
14. What action do you need to take if you are overtaking another aircraft and which aircraft has the right-of-way? What should you do if you are flying a head-on collision course with another aircraft? If another single-engine aircraft is converging from the right, who has the right-of-way? (FAR 91.113)  
 .....  
 .....
15. Except when necessary for takeoffs and landings, what are the minimum safe altitudes when flying over congested and other than congested areas? (FAR 91.119)  
 .....  
 .....
16. If an altimeter setting is not available at an airport, what setting should you use before departing on a local flight?  
 .....
17. What altitude should you use when operating under VFR in level cruising flight at more than 3,000 feet AGL? (FAR 91.159)  
 .....  
 .....
18. When practicing steep turns, stalls, and maneuvering during slow flight, the entry altitude must allow a recovery to be completed no lower than feet \_\_\_\_\_AGL.
19. When is a go-around appropriate? List 4 situations.  
 .....  
 .....
20. What general steps should you follow after an engine failure in flight?  
 .....  
 .....

## AIRCRAFT QUESTIONS

1. List the minimum equipment and instruments that must be working properly in your aircraft for day VFR flight. (FAR 91.205)  
 .....  
 .....

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

<u>Definition</u>	<u>Speed x your aircraft</u>
V <sub>SO</sub> _____	_____
V <sub>S1</sub> _____	_____
V <sub>X</sub> _____	_____
V <sub>Y</sub> _____	_____

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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?  
 \_\_\_\_\_ KIAS.
4. What is the maximum allowable flap setting for takeoff in your aircraft? \_\_\_\_\_ degrees.
5. The total usable fuel capacity for your aircraft is ..... gallons. On a standard day (sea level temperature, 59°F, altimeter 29.92 in. Hg., the fuel consumption rate during normal (approximately 75% power) cruise is ..... gallons per hour.
6. What grade or grades of fuel can be safely used in your aircraft. What are the colors of the recommended fuels? What happens to be the color of the fuel if two grades are mixed?  
 .....  
 .....
7. The MAXIMUM OIL capacity of your aircraft is \_\_\_\_\_ quarts, and the MINIMUM OIL capacity to begin a flight is \_\_\_\_\_ quarts.
8. The maximum crosswind component specified our instructor for solo takeoffs and landings in the training aircraft is \_\_\_\_\_ knots.
9. When do you use carburetor heat? What are the indications of carburetor icing?  
 .....  
 .....
10. What is the takeoff and landing distance over a 50-foot obstacle for your aircraft at your airport? Assume maximum certificated takeoff weight, 80 °F, winds calm, and an altimeter setting of 29.52  
 .....  
 .....

## AIRPORT & LOCAL AIRSPACE QUESTIONS

1. What are the traffic patterns for each runway at your airport? What is the MSL altitude for the traffic pattern?  
 .....  
 .....
2. How do you enter and exit the traffic pattern at your airport?  
 .....  
 .....
3. What radio calls are required at your airport (List also the frequencies for AWOS, GROUND and TOWER control)?  
 .....  
 .....

4. What is the standard direction of turns in the traffic pattern? Give an example of a visual display indicating a nonstandard traffic pattern.  
 .....  
 .....
5. What is CTAF? Explain CTAF procedures at your training airport(s). What radio calls are recommended in the traffic pattern at an uncontrolled airport?  
 .....  
 .....
6. How can you determine if a runway is closed?  
 .....  
 .....
7. What are the typical dimensions of Class D airspace and what requirement(s) must be met prior to entry?  
 .....  
 .....
8. Can you practice ground reference maneuvers when you are within Class D airspace? Explain.  
 .....  
 .....
9. If you receive ATC instructions that you feel may compromise safety or will cause you to violate an FAR, what should you do?  
 .....  
 .....
10. What do you do if you have a radio failure?  
 .....  
 .....

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

	<u>in flight</u>	<u>on the ground</u>
STEADY GREEN		
FLASHING GREEN		
FLASHING RED		
STEADY RED		
Red-Green alternating		

12. In addition to equipment requirements and a student pilot certificate, what other requirement(s), if any, must be met before a student pilot is authorized to fly solo within Class B airspace?  
 .....  
 .....
13. Explain the general transponder equipment and use requirement(s) when operating within or near Class B airspace.  
 .....  
 .....

# STUDENT PRE-SOLO WRITTEN TEST

14. Describe Class B airspace boundaries, and how they apply to an airport within that airspace. Explain how you can use navigation equipment and/or ground reference points to identify the Class B boundaries. (Draw a diagram, if necessary).

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15. You have called ATC just prior to entering Class B airspace, and the controller tells you to "Squawk 2466 and ident." Are you now allowed to enter Class B airspace without any further instructions? Explain.

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16. On a sectional chart, what does a dashed magenta line around an airport indicate?

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.....  
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17. Explain the minimum visibility and ceiling requirements for VFR flight in Class D airspace.

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18. Can a student request a special VFR clearance in Class D airspace when visibility is less than three miles? Explain your answer.

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.....

19. You have called ATC prior to entering Class C airspace, and the controller responds with your call sign and tells you to "Standby." Are you now allowed to enter this airspace without any further instructions? Explain.

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.....

20. Describe the typical dimensions of Class C airspace. Is participation in the radar service mandatory within the outer are of Class C airspace?

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.....

21. Describe the Class C boundaries that affect your airport or a nearby airport. Explain how you can use navigation equipment and/or ground reference points to identify the Class C airspace inner core surface area and shelf area, as well as the outer area. Draw a diagram, if necessary.

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I have completed the PRE-SOLO Written Exam and reviewed the areas covered with my flight instructor.

Student Pilot's Signature .....

Graded by .....

Grade.....

Date .....