



PRESOLO KNOWLEDGE EXAM

Pilot's Name _____
Aircraft Make and Model _____
Date of Exam _____

According to FAR 61.87 Solo Requirements for Student Pilots, as a student pilot, you must demonstrate satisfactory aeronautical knowledge on an exam that evaluates your 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.

Your instructor must administer the exam, and at the conclusion of the exam, review all the incorrect answers with you and submit the completed *Record of Examination Results* table on page 11 before authorizing you to conduct a solo flight.

This exam contains a total of 50 questions – 20 general questions, 10 aircraft questions, and 20 airport and airspace questions. Normally, the general and aircraft questions apply to all students; however, some of the airport and airspace questions may not be applicable. Flight instructors who administer this test may add or delete questions as necessary to make the exam more appropriate to the training aircraft and the surrounding flight environment.

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General Questions

Instructions: All students should answer the general questions.

- 1. What personal documents and endorsements are you required to have before you fly solo?

- 2. What are your student pilot limitations regarding carriage of passengers or cargo and flying for compensation or hire?

- 3. Explain student pilot limitations concerning visibility and flight above clouds.

- 4. Who has the final authority and responsibility for the operation of the airplane when you are flying solo?

- 5. Discuss what preflight action concerning the airport and airplane performance is specified in the regulations for a local flight.

6. During engine runup, 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? _____

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 C/ADS-B is required at all times in all airspace at and above _____ feet MSL, excluding that airspace at and below _____ feet AGL.

11. What aircraft certificate and documents must be on board when you are flying solo?

A-- _____

R-- _____

R-- _____

O-- _____

W-- _____

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?

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?

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

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

17. What altitudes should you use when operating under VFR in level cruising flight at more than 3,000 feet AGL?

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?

20. What general steps should you follow after an engine failure in flight?

Aircraft Questions

Instructions: All students should answer the aircraft questions. If necessary, the instructor may include additional questions that are pertinent to the make and model airplane to be flown.

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

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

	DEFINITION	SPEED
V_{SO}	<hr/>	<hr/>
V_{S1}	<hr/>	<hr/>
V_X	<hr/>	<hr/>
V_Y	<hr/>	<hr/>
V_{FE}	<hr/>	<hr/>
V_A	<hr/>	<hr/>
V_{NO}	<hr/>	<hr/>
V_{NE}	<hr/>	<hr/>

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

- 4. What is the maximum allowable flap setting for takeoff in your airplane? _____

- 5. The total usable fuel capacity for your airplane is ____ gallons (standard range) or ____ gallons (extended range). 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 airplane? What are the colors of the recommended fuels? What happens to the color of the fuel if two grades are mixed?

- 7. The maxim oil capacity of your airplane is ____ quarts, and the minimum oil capacity to begin a flight is ____ quarts.

- 8. The maximum crosswind component specified by your instructor for solo takeoffs and landings in the training airplane is ____ knots.

- 9. If your airplane is equipped with a carburetor, 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 airplane at your airport? Assume maximum certificated takeoff weight, 80° F, winds calm, and an altimeter setting of 29.52 in. Hg.

Airport and Local Airspace Questions

Instructions: Flight instructors might assign only those questions that pertain to the student's airport environment and surrounding local area and may assign additional questions for a particular flying area.

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? What, if any, radio communications are required?

3. What radio calls are recommended in the traffic pattern at an uncontrolled airport? What radio calls are required at your airport?

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 airports(s).

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. What is the maximum speed permitted for aircraft below 10,000 feet MSL? What is the maximum speed allowed in Class B airspace? What is the maximum speed allowed in a VFR corridor through Class B airspace?

9. If you receive ATC instructions that you feel might compromise safety or will cause you to violate an FAR, what should you do?

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

IN FLIGHT

Steady green -- _____

Flashing green -- _____

Flashing Red -- _____

Steady Red -- _____

ON THE GROUND

Flashing Red -- _____

Flashing Green -- _____

11. 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?

12. Explain the general transponder equipment and use requirement(s) when operating within or near Class B airspace.

13. 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 on page 10, if necessary.)

14. 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

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

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

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

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

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

20. 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 on page 10, if necessary.)

FOR NOTES AND DIAGRAMS



PRESOLO KNOWLEDGE EXAM

Pilot's Name _____

Aircraft Make and Model _____

Date of Exam _____

Date of Exam Critique _____

Instructor's Signature _____

Record of Examination Results

Instructions: The instructor will mark an X (or circle sub questions) for each corresponding question the student initially answered incorrectly in the Presolo Exam. Upload this form into the student's training record.

General Questions	Aircraft Questions	Airport and Local Airspace Questions
1	1	1
2	2 V_{SO} V_{S1} V_X V_Y V_{FE} V_A V_{NO} V_{NE}	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10 SG FG FR SR FR FG
11 A R R O W		11
12		12
13		13
14		14
15		15
16		16
17		17
18		18
19		19
20		20



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