

Pre-Solo Written Exam

Student: _____

Date: _____

This test is divided into two sections: a closed book written quiz and an open-book take-home test. This type of test is recommended by the AOPA Air Safety Foundation because it not only requires you to learn the information, but also and perhaps more importantly, teaches you where to find it. For this reason, you should reference every answer on the take home test (i.e. Title 14 CFR Part 91.3).

This exam contains a total of 50 questions; however, flight instructors who administer this test may add or delete questions as necessary to make the exam more appropriate to your training aircraft and your flight environment. If your surrounding area includes controlled airspace, such as Class B, C, D, or E airspace, you will be required to answer the questions concerning operations in those areas.

Federal Aviation Regulations require that the instructor that will permit you to solo to:

- i. Administer this test;
- ii. Grade this test; and
- iii. Review all incorrect answers.

Instructor: _____

Airport Name, Identifier: _____

Surrounding Airspace: _____

Aircraft Make/Model: _____

Questions Omitted: _____

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Section 1: Take-Home Test

1) What personal documents and endorsements must you to have in your possession when you fly solo?

:

2) May a student pilot carry passengers? If yes, under what circumstances?

:

3) May a student pilot be compensated for flying? If yes, under what circumstances?

:

4) What are the student pilot visibility requirements and limitations on flight above cloud layers?

:

5) Who has the final authority and responsibility for the operation of the aircraft when you are flying solo?

:

6) What aircraft certificates and documents are required to be on board the aircraft?

:

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7) What are the regulations regarding alcohol consumption and flying?

:

8) What preflight planning action is required by regulation for a local flight?

:

9) When must a pilot wear his or her safety belt and shoulder harness?

:

10) Answer all of the following question regarding right-of-way rules:

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

ii. What action do you need to take if you are overtaking another aircraft and which aircraft has the right-of-way?

iii. What should you do if you are flying a head-on collision course with another aircraft?

iv. If another single-engine aircraft is converging from the right, who has the right-of-way?

:

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11) Except when necessary for takeoffs and landings, what is the minimum safe altitude when flying over a congested area?

:

12) If an altimeter setting is not available at the departure airport, how should the altimeter be set?

:

13) What is the standard direction of turns in the traffic pattern?

:

14) What is the minimum fuel reserve for day VFR flight? On what speed is the fuel reserve based?

:

15) Draw the pavement marking requiring you to stop, if no clearance has been received, before entering onto runway.

16) What should you do if you lose radio communication when arriving at an airport with an operating control tower?

:

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17) What altitude rules should you use when operating under VFR in level cruising flight at more than 3,000, but below 18,000 feet AGL?

:

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

:

19) When must the aircraft's navigation lights be turned on?

:

20) When is a go-around appropriate?

21) What radio calls, if any, are required at your airport?

:

22) What pavement markings, airport signs, and publications can you use to determine if a runway is closed?

:

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23) If you receive ATC instructions that you feel may compromise safety or will cause you to violate a regulation, what should you do?

:

24) On a sectional chart, what does a dashed blue line around an airport indicate?

25) What are the typical dimensions of Class D airspace?

:

26) What requirement(s) must be met prior to entering Class D airspace?

:

27) You call ATC just prior to entering Class B airspace and the controller responds with your call sign and tells you to "Squawk 2516 and ident." Are you now allowed to enter the Class B airspace?

:

28) You call ATC prior to entering Class D airspace and the controller responds with your call sign and tells you to "Standby." Are you now allowed to enter the Class D airspace?

:

29) Can a student pilot request a special VFR clearance in Class D airspace when visibility is less than three miles?

:

30) What are the typical dimensions of Class C airspace?

:

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31) Is participation in the radar service mandatory within the outer area (normally 10 nautical miles to 20 nautical miles from the primary airport) of Class C airspace?

:

32) What is the takeoff and landing distance over a 50-foot obstacle for your aircraft at your airport? Assume the following conditions: Maximum certificated takeoff weight, 25° C, calm winds, and an altimeter setting of 30.42.

33) On a standard day the fuel consumption rate during normal (75% power) cruise is how many gallons per hour?

34) Answer all of the following questions regarding your aircraft's fuel:

i. What grade or grades of fuel can be safely used in your aircraft?

ii. What are the colors of the recommended fuels?

35) What is the maximum and minimum oil capacity to begin a flight in your aircraft?

END OF TAKE HOME TEST

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Section 2: Pre-Solo Quiz

36) Fill in the V-speed definitions and the corresponding speed for your aircraft:

	DEFINITION	SPEED
V _{S0}	_____	_____
V _{S1}	_____	_____
V _X	_____	_____
V _Y	_____	_____
V _{FE}	_____	_____
V _A	_____	_____
V _{NO}	_____	_____
V _{NE}	_____	_____

37) What is the best glide speed for your aircraft?

38) What is the total usable fuel capacity of your aircraft?

39) What is the maximum crosswind component, if any, for your aircraft?

40) Answer all of the following questions regarding carburetor heat:

i. When should you use carburetor heat?

ii. What are the indications of carburetor icing?

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41) What procedure should you follow after a total loss of engine power while in cruise flight?

42) List the procedure to respond to an engine fire on the ground while starting.

43) What are the traffic patterns for each runway at your airport? What is the MSL altitude for each traffic pattern?

44) How do you enter and exit the traffic pattern at your airport?

45) What is the meaning of each of the following ATC light gun signals?

	IN FLIGHT	ON THE GROUND
Steady Green	<hr/>	<hr/>
Flashing Green	<hr/>	<hr/>
Flashing Red	<hr/>	<hr/>
Steady Red	<hr/>	<hr/>
Alternating	<hr/>	<hr/>
Flashing White	<hr/>	<hr/>

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46) On a sectional chart, what does a dashed magenta line around an airport indicate?

47) What are the minimum visibility and ceiling requirements for VFR flight in Class D airspace?

48) 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?

49) What are the minimum visibility and ceiling requirements for VFR flight in Class B airspace?

50) Describe the typical dimensions of Class B airspace.

END OF TEST