

Pre-Solo Written Exam

Student: _____

Date: _____

Instructor: _____

Aircraft: _____

This exam is not intended to reflect all of the skills and knowledge required to fly solo. It is intended to examine the student pilot's understanding of some of the procedures and limitations to be used while flying solo.

This is an open book exam. You are allowed, even encouraged, to look up information in the FAR/AIM, the aircraft POH, an A/FD, or on a sectional chart. **Many questions, particularly those dealing with regulations, will need to include the reference where you found the answer.** An example might be a question asking about the requirement of flight instructors to give a student pilot a pre-solo written exam prior to allowing the pilot to solo. The reference would be FAR Part 61.87(b).

Once the exam has been completed, you and your flight instructor will review and discuss your answers. You will be allowed to correct any wrong answers. All questions must be answered correctly to pass the exam.

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

Reference:

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

Reference:

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

Reference:

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

Reference:

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

Reference:

6) When are you permitted to deviate from an ATC instruction?

Reference:

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

V_{so}: _____

V_s: _____

V_x: _____

V_y: _____

V_{fe}: _____

V_a: _____

V_{no}: _____

V_{ne}: _____

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8) What is the best glide speed for your aircraft and when is it used?

9) What is the total fuel capacity of your aircraft? How much is usable? When can you use the unusable fuel?

10) What is the maximum demonstrated crosswind component of your aircraft? Is it a legal limitation?

11) What are the indications of carburetor ice? What action do you take? How will it act?

12) During runup what is the maximum allowable rpm drop? What is the procedure if it is exceeded?

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

14) Will the engine still run if the master switch is turned off? Why or why not?

15) Why is it necessary to drain fuel out of the sumps after refueling and before the first flight of the day?

16) Should you always set the mixture full rich for takeoff? If not, when would it be leaner?

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

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

19) Describe the procedure for the loss of communications at an airport with an operating control tower.

Reference:

20) List and describe each of the light gun signals available from ATC.

SIGNAL	ON GROUND	IN FLIGHT
Steady Green		
Flashing Green		
Steady Red		
Flashing Red		
Flashing White		
Alternating Red and Green		

Reference:

21) Refer to the AIM Section 4-3-13 (b)(2) and Section 6-4-1 (a). You have lost communications with Yakima Tower and have followed the proper procedures. You have entered the left downwind for runway 27 and see the steady red light from the tower. What do you do now?

22) What are the typical dimensions of Class D airspace and how is Class D depicted on a sectional chart?

Reference:

23) What requirement(s) must be met before entering Class D airspace?

Reference:

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24) You call Yakima tower prior to entering the Class D airspace and the controller responds with your aircraft type (example: Cessna 172) and says, "standby." Are you now allowed to enter the airspace? If not, what do you do?

Reference:

25) When south of the Yakima airport, what landmark(s) can you use to determine where Class D airspace starts?

26) While in the traffic pattern, the controller says, "extend downwind, I'll call your base." What do you do?

27) While in the traffic pattern, the controller says, "execute a right 360 for spacing." What do you do?

28) While listening to ATIS, you hear "restricted area 6714 alpha active surface to 12,000." What does that mean?

29) What is the minimum visibility, ceiling, and cloud clearance for VFR flight in Class D airspace?

Reference:

30) Fill in the following information for the Yakima airport:

ATIS frequency	
Ground frequency	
Tower frequency	
Traffic Pattern Altitude (TPA)	

31) Draw the pavement marking requiring you to stop, if no clearance has been received, before entering onto the runway. Label the side the runway is on.

32) (Refer to your airport diagram for KYKM) You are parked at the museum and request taxi. The controller responds by saying, "cleared to taxi to runway 9 via left turn on bravo, then alpha to alpha 5". At what position on the airport do you need to stop before receiving further clearance?

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33) What are wing tip vortices (wake turbulence)? With which aircraft are they greatest? Describe proper avoidance.

34) When is a go-around appropriate? Describe the procedure for a go-around.

35) When are you required to wear a safety belt? When are you required to wear a shoulder harness?

Reference:

36) Refer to the AIM Section 4-3-22. What does "cleared for the option" permit you to do?

37) Except for takeoffs and landings, what is the minimum safe altitude over a congested area?

Reference:

38) If another single engine airplane is converging from the right, who has the right of way?

Reference:

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

Reference:

40) What is the authority and responsibility of the pilot in command? When are you permitted to deviate from an ATC instruction?

Reference: