

New Tech Aviation

Pre-Solo Student Knowledge Test

Student (name): _____

Airplane make/model: _____

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 student's 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, 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 the aircraft to be flown. Student pilots should understand that the pre-solo written exam is a separate exam and is in addition to the FAA Private Pilot knowledge test.

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 either the current FAR/AIM and/or the Pilot Operating Handbook/Owner's 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.

This is not a pass/fail exam. 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.

You will need:

Federal Aviation Regulations (FAR's)
Aeronautical Information Manual (AIM) with Pilot/Controller Glossary
Aviation Sectional Chart
Private Pilot Practical Test Standards for Single-Engine Land Airplanes
Airport/Facility Directory
Pilot's Operating Handbook for the airplane in which you are training (POH)

1. Who is ultimately responsible for the operation of an aircraft and what does that responsibility entail? (FAR 91.3 and FAR 1.1 - Pilot-in-Command)

2. What must a student pilot have in his/her logbook in order to solo an airplane? (FAR 61.93)

3. What must a student pilot have in his/her logbook in order to solo an airplane doing touch and go takeoff and landing practice at an airport within 25 nm from the training airport? (FAR 61.93)

4. What is considered cross country by the FAA and what personal documents must a Student Pilot carry when flying cross country? (FAR 61.51)

5. What must a student pilot have in his/her logbook in order to solo an airplane on an approved cross-country flight of more than 50 nm from the training airport? (FAR 61.93 (b)(2))
6. What are the limitations for a student pilot carrying passengers? (FAR 61.89)
7. Explain preflight action requirements necessary before flying an airplane. (FAR 91.7 and FAR 91.103)
8. What airplane documents must be on-board the airplane for every flight? (FAR 91.9 and FAR 91.203)
9. You may not fly an airplane within _____hours after the consumption of an alcoholic beverage or with_____% by weight or more of alcohol in your blood. (FAR 91.17)
10. How are Restricted and Prohibited airspace depicted on a Sectional Chart? (See Sectional Chart).
11. Are all Restricted and Prohibited airspace depicted on Sectional Charts? (FAR 91.139)
12. Are you allowed to fly in Restricted Airspace? Are you allowed to fly in Prohibited Airspace? FAR 91.133 and AIM 3-4-2 and 3.
13. What is day-VisualFlight Rule (VFR) fuel requirements? (FAR 91.151)
14. If you have concern over the safety of a proposed flight path, where can you go for help? (AIM 4-1-3 and AIM 5-1-3)
15. What are the day-VisualFlight Rule (VFR) fuel requirements? (FAR 91.151)
16. Explain the use of safety belts and shoulder harnesses for crew members? (FAR 91.105)
17. Explain the use of safety belts and shoulder harnesses for passengers? FAR 91.107 (a)(3)
18. What is basic VisualFlight Rule (VFR) weather minimums? (FAR 91.155)
19. For a student pilot are there more restrictive visibility requirements than basic VFR visibility minimums? (FAR 61.89)
20. For a student pilot are there more restrictive flight-above-cloud requirements than basic VFR visibility and cloud separation requirements? (FAR 61.89)
21. What are the minimum safe altitudes for the operation of an airplane? (FAR 91.119)

22. When two airplanes are approaching at right angles to each other at the same altitude what action should each take? (FAR 91.113) (d)
23. When practicing performance maneuvers such as steep turns, slow flight, power-on or power-off stalls you should have an altitude of at least _____? (Practical Test Standards)
24. List the meaning of the following ATC light gun signals: (FAR 91.125)

Light Displayed	IN-FLIGHT	ON-GROUND
Steady Green		
Flashing Green		
Steady Red		
Flashing Red		
Flashing White		
Alternating Red & Green		

25. What is the difference between a towered and a non-towered airport and is the training airport a towered or a non-towered airport? (Pilot/Controller Glossary See-TOWER, AIM 4-3-2 (a) and AIM 4-1-through (c))
26. Explain the procedures you would use to land at the training airport if your communication radios failed in flight? (FAR 91.185 (b), AIM 6-4-1 and 6-4-2)
27. Draw the runway configuration and the major taxiway configuration of the training airport. (Airport Facility Directory).

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28. What are the normal traffic patterns and traffic pattern altitudes around the training airport? (A F D)
29. What are the following radio frequencies at the training airport? Airport/Facility Directory
 - ATIS / AWOS _____
 - Ground Control _____
 - Tower _____
 - Approach/Depart. _____
 - CTAF _____
 - Flight Service Station (FSS) _____

30. List the airspeeds and their definitions for your training airplane: FAR 1.2 Cessna POH:

SPEED Reference	Actual Indicated Aircraft Speed	Meaning
VSO		
VS1		
Vr		
Vx		
Vy		
Vfe		
Va		
Vno		
Vne		

31. What is the maximum ramp (gross) weight for your training airplane? (POH)

32. What is the maximum takeoff weight for your training airplane? (POH)
33. What is the maximum fuel capacity for your training airplane and how much of that capacity is usable? (POH)
34. What is the minimum and maximum oil capacity of your training airplane?(P O H)
35. What is the best glide speed for your training airplane? (POH)
36. When is carburetor heat recommended in your training airplane? (POH)
37. Explain the recommended use of flaps for the normal landing of your training airplane? (POH)
38. Explain the procedures you would follow if the engine failed or ran "rough" in your training airplane immediately after takeoff? (POH)
39. Explain the procedures you would follow if the engine failed in your training airplane on takeoff after crossing the end of the runway and before you reached 600 feet? (POH)
40. Explain the procedures you would follow if the engine failed in your training airplane at 3,500 feet (or higher) AGL while you are flying over a sparsely populated terrain? (POH)

Date Reviewed: _____ **CFI** _____

(Note to Flight Instructor: You must enter a record of test completion in the student logbook).