

# PRE SOLO WRITTEN EXAM

*Cirrus SR20/22/22T ver1.3*



In order to engage in solo flight, all student pilots must pass an aeronautical knowledge test as specified in CFR §61.87. The test must address knowledge in the appropriate regulations in parts 61 and 91, airspace rules and procedures, and flight characteristics and limitations of the model of aircraft being flown. After the test, your instructor must review with you all questions that were answered incorrectly.

The answers to these questions are found in the regulations, your POH, the Cirrus iFOM, the Airmen Information Manual (AIM) or in your ground training course. We strongly urge you NOT to google the answers, except as a last resort, as there are a lot of incorrect answers given on various forums as many of these answers change over time. Almost all of the questions contain the source material for the answer to aid you in your study.

In addition, in order to go solo, you will have to have received flight training in the areas listed in §61.87(d), have completed your medical, and received the appropriate endorsements in your logbook. Good luck on the test, and we look forward to your taking your first big step towards changing your life with personal aviation.

## Section I: Regulations

- 1) When does your student pilot certificate expire (§61.19)?

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- 2) How long is your medical certificate good for, and what class of medical certificate is required for private pilots? (§61.23).

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- 3) What documents must you have with you when you solo (§61.3(a)(2), 61.23, 61.51 (i)(2))?

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- 4) What endorsements must be in your logbook to go solo (§61.87(b,n))?

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- 5) What is the minimum age to solo an airplane (§61.83)?

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- 6) What is required to solo at night (§61.87(o))?

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7) What are the 8 limitations on students acting as pilot-in-command (§61.89(a))?

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8) Can you log pilot in command time as a student pilot (§61.51 (e) (4))?

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9) Who is the final authority as to the operation of the aircraft when you go solo (§91.3)?

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10) If you do something “stupid” that is not specifically prohibited by the regulations, can you get in trouble? Why? (§91.13)

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11) What are the regulations concerning alcohol consumption and flying (§91.17 (a) and (b))?

pilots: \_\_\_\_\_

passengers: \_\_\_\_\_

12) What are the regulations regarding seatbelts (§91.105 and §91.107)?

Crewmembers: \_\_\_\_\_

passengers: \_\_\_\_\_

13) What are the requirements for preflight action (§91.103)?

In general: \_\_\_\_\_

All flights \_\_\_\_\_

Not in the vicinity of an airport \_\_\_\_\_

\_\_\_\_\_

14) What are the restrictions for flight near another aircraft (§91.111)?

\_\_\_\_\_

\_\_\_\_\_

15) What are the right of way rules (§91.113)

General \_\_\_\_\_

In distress \_\_\_\_\_

Converging \_\_\_\_\_

Head-on \_\_\_\_\_

Overtaking \_\_\_\_\_

Landing \_\_\_\_\_

16) What are the maximum speeds for the following (§91.117)?

Below 10,000 feet: \_\_\_\_\_

Within 4nm of Class C or Class D \_\_\_\_\_

Class B \_\_\_\_\_

VFR corridor in Bravo \_\_\_\_\_

17) What are the minimum safe altitudes for flight (except for takeoff and landing) (§91.119)

Anywhere \_\_\_\_\_

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Over congested areas \_\_\_\_\_

Other than congested areas \_\_\_\_\_

Sparsely populated areas/open water \_\_\_\_\_

18) How will you obtain the appropriate altimeter setting for your flights (§91.121)?

\_\_\_\_\_

19) When is a transponder necessary (§91.215)?

\_\_\_\_\_

\_\_\_\_\_

20) When is ADS-B necessary (§91.225)?

\_\_\_\_\_

\_\_\_\_\_

21) What are the day, VFR fuel requirements (§91.151)?

\_\_\_\_\_

\_\_\_\_\_

22) What altitudes should you operate when cruising (§91.159)?

Easterly, on what headings and altitudes \_\_\_\_\_

Westerly on what headings and altitudes \_\_\_\_\_

above what altitude \_\_\_\_\_ AGL or MSL? (circle one)

Is this based on true course, true heading, magnetic course, or magnetic heading? (circle one)

## Section II: Airport and Local area Operations

- 1) What are the directions of turns in the traffic pattern at our airport (§91.126(b))?

\_\_\_\_\_

- 2) What is the traffic pattern altitude at our airport (consult chart supplement)?

\_\_\_\_\_

- 3) What is the standard way to enter and exit the pattern (AIM 4-3-3)?

enter \_\_\_\_\_

exit \_\_\_\_\_

- 4) What are the proper radio calls to make in the pattern (please see A/C 90-66b and AIM 4-1-9-G)

Write out the full call for a downwind call:

\_\_\_\_\_

\_\_\_\_\_

What radio calls are recommended to make around the airport (AIM 4-1-9-G)

\_\_\_\_\_

\_\_\_\_\_

- 5) How do you determine if a runway is closed (AIM 2-3-6, and AIM 5-1-3)

While over the airport? \_\_\_\_\_

In preflight? \_\_\_\_\_

- 6) What is the typical height of Class D airspace? What are entry requirements?

Height (AIM 3-2-5) \_\_\_\_\_

Entry requirements (§91.129) \_\_\_\_\_

7) What is the nearest class Delta to our airport? How will you avoid it?

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8) What is necessary to operate specifically as a student in Class B airspace (§61.95)?

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9) What is the nearest Class B airspace to our airport? How will you avoid it?

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10) What are the entry requirements for Class B (§91.131 and §91.215)?

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11) What are the dimensions (altitude and area) of the nearest Class B to us? Are they typical?

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12) If NY approach tells you to squawk 3455 and ident, are you allowed to enter the NY Bravo?  
Explain (AIM 3-2-3 (e))

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13) What is the nearest Class C airspace to our airport? How will you avoid it?

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14) If Allentown approach tells you to squawk 3455 and ident, are you allowed to enter the Class C?  
What if they say your callsign and standby? (3-2-4, especially C3 note 1). Explain.

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15) What are the typical dimensions of Class C airspace (AIM 3-2-4)

inner area\_\_\_\_\_

shelf area\_\_\_\_\_

outer area (see 3-2-4 c3 note 4) \_\_\_\_\_

16) What are the minimums for flight in Class D (§91.155)?

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17) What airspace is our airport in? What are the VFR weather minimum here? What about 1000 feet above the airport?

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18) What is the nearest restricted area? Can we ever fly through it (See NY sectional chart)? Explain

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19) What is an alert area? Where is the nearest one? What should we do if near it or in it?

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20) What is a presidential TFR? What are the dimensions? Can students fly in TFRs? (AC 91-63D)

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21) What is the noise abatement policy at our airport?

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## Section II: Airport and Local area Operations

- 1) What is the minimum equipment required by the FAA for day VFR flight (§91.205)?

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- 2) What additional equipment is required by the manufacturer (Cirrus) of your aircraft (POH)

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- 3) What are the following Vspeeds and their definitions (POH): - assume max gross if needed

Definition	Speed
V <sub>so</sub> _____	_____
V <sub>s1</sub> _____	_____
V <sub>x</sub> _____	_____
V <sub>y</sub> _____	_____
V <sub>fe50/100</sub> _____	_____/____
V <sub>o</sub> _____	_____
V <sub>pd</sub> _____	_____
V <sub>no</sub> _____	_____
V <sub>ne</sub> _____	_____
V <sub>g</sub> _____	_____
V <sub>r</sub> _____	_____

4) What flap setting do you use for takeoff (POH)? \_\_\_\_\_

5) What grade of fuel do we use in your aircraft (POH)? \_\_\_\_\_

6) What is the total usable fuel capacity in Gallons (POH) \_\_\_\_\_

how much fuel if filled to tabs? \_\_\_\_\_

What is endurance at 75% ROP operation at 4500 feet for

full fuel \_\_\_\_\_

tabs \_\_\_\_\_

7) What should you do if you get an Alt 1 failure? Can you safely finish your VFR flight (POH)?

\_\_\_\_\_

\_\_\_\_\_

8) What should you do if you get an Alt 2 failure? Can you safely finish your flight(POH)?

\_\_\_\_\_

\_\_\_\_\_

9) What is the minimum recommended CAPS altitude? \_\_\_\_\_

What about for spins? \_\_\_\_\_

At what altitude should you plan to pull CAPS by, if necessary at descending from altitude?

\_\_\_\_\_

10) What is your plan of action in an engine failure, and what altitudes (iFOM)?

Low altitudes: \_\_\_\_\_

After takeoff: \_\_\_\_\_

At cruise: \_\_\_\_\_

11) What is the spin recovery technique (iFOM)? \_\_\_\_\_

12) What should you do if you fly into IMC or get into an unusual attitude (iFOM)?

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13) When engaging the autopilot, what are the default modes of operation (POH)?

Vertical \_\_\_\_\_ Lateral \_\_\_\_\_

14) What are the 3 ways to turn off the autopilot (POH)?

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15) What are the limitations for student pilot solos at Elite Flight (Elite operations manual)?

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16) What is the takeoff and landing distance over a 50 foot obstacle? Assume altimeter setting of 29.52, temperature 90F, and 5 knot tailwind (POH)

takeoff \_\_\_\_\_ landing \_\_\_\_\_

17) What is the limitation on operation of the air-conditioning for takeoff (POH)?

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18) What should you do if you have an emergency while solo?

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19) What is the phone number to call Elite at if you have a problem away from the airport?