

# Student Pilot Written Pre-solo Test

## Central Indiana Soaring Society

Pilot: \_\_\_\_\_ Date: \_\_\_\_\_

CFIG: \_\_\_\_\_ Certificate #: \_\_\_\_\_

1. How long is your glider student certificate valid from the date of issue?
  - a. 24 months
  - b. 60 months
  - c. 90 days
  
2. When your logbook is endorsed for solo, how long may you legally solo before needing another logbook endorsement from an instructor?
  - a. As long as your student certificate is valid.
  - b. As long as you have logged a flight in the past 30 days.
  - c. 90 days regardless of whether you have flown or not.
  
3. What documents are required to be on board your sailplane or on your person prior to take-off?

<input type="checkbox"/> Airworthiness Certificate	<input type="checkbox"/> Registration	<input type="checkbox"/> Glider Radio Station License
<input type="checkbox"/> Glider Flight Manual	<input type="checkbox"/> Pilot Log Book	<input type="checkbox"/> Radio Operating Manual
<input type="checkbox"/> Weight & Balance Data	<input type="checkbox"/> Glider Check Lists	<input type="checkbox"/> Glider Logbooks
<input type="checkbox"/> Student Pilot Certificate	<input type="checkbox"/> Photo ID	<input type="checkbox"/> Glider Type Certificate Data Sheet
  
4. CISS rules require solo pilots to remain within gliding distance of the airport. How will you determine if you are within gliding distance?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
5. You have taken off on Runway 27, and while flying over the golf course, it appears the wind has increased in velocity and changed to the East. You feel it would be better to land into the wind on runway 09 than to make a downwind landing on Runway 27. If the radio in the glider is working, who has the final legal authority and responsibility for deciding which runway to use?
  - a. The instructor who initialed the schedule for your flight if he is available on the ground or on the radio in another glider.
  - b. The crew chief or the person they have authorized to provide airport runway information to arriving aircraft on the 123.05 MHz Alexandria CTAF frequency.
  - c. You, as the student pilot flying the glider.
  
6. Assume you are of legal age and you have had a beer at 2 AM. What is the earliest time you can legally fly later in the day according to the FAA regulations?
  - a. At 8 AM if your blood alcohol level is below .04
  - b. At 10 AM
  - c. At 2 PM
  
7. When flying below 10,000 ft. MSL near Alexandria, what distance must you remain from the clouds?  
Below \_\_\_\_\_ ft. Above \_\_\_\_\_ ft. Horizontal \_\_\_\_\_ ft.
  
8. Why do the FAR's require you to stay so far away from the clouds?  
\_\_\_\_\_  
\_\_\_\_\_

9. You are on base leg for runway 27, but you notice an airplane coming in on long final from your right. (You do quickly look out while on base leg, rather than just stare at the airport, right?) Who has the right of way and what would you do?

---

---

10. You suddenly see a glider coming straight at you when flying south. Which way should you adjust course to avoid the other glider?

- a. Adjust course to your left to pass the oncoming glider on your right.
- b. Adjust course to your right to pass the oncoming glider on your left.

11. Late evening flights are beautiful, both for practice in smooth air and sometimes there is lift that lasts past sunset. How long can you legally operate CISS gliders past sunset, if there is enough twilight to clearly see the runway, and the usual visibility requirements hold?

- a. Until the Crew Chief announces on the radio that operations are shutting down.
- b. So long as you can clearly see unlighted ground objects at a distance of at least 3 miles.
- c. You must be on the ground at sunset.

12. Preparing for takeoff you notice the Altimeter cannot be set to field elevation. Are you legal to fly?

- a. If you have logged covered altimeter flights with an instructor, you are legal to fly.
- b. If the altimeter is properly placarded per FAR 91.213 as Inoperative, you are legal to fly.
- c. You cannot legally fly the glider until the altimeter is repaired or replaced.

13. After takeoff on tow you glance at the airspeed and it is indicating zero. You should:

- a. Release immediately.
- b. Continue to fly and land as soon as safe and practical.
- c. Either a. or b. depending on your assessment of the situation at the time.

14. You show up at the airport on Wednesday and several licensed pilots are launching for OLC flights. It is a nice day with weather you feel comfortable in and within any limitations placed on your endorsements, but no instructor is on the airport. Is it ok for you to fly solo?

- a. Yes, according to the FAR's, but no due to CISS insurance restrictions.
- b. No. The FAR's require solo supervision by an instructor on the field.
- c. Yes, if the tow pilot reviews your logbook and agrees to tow you in the existing conditions.

15. What will you do if the tow plane Rocks its Wings while towing you?

- a. Release immediately.
- b. Check to be certain your spoilers are closed and locked.
- c. Be alert for slack rope as the tow plane slows for turbulence in the area.

16. What will you do if the tow plane Fans the Rudder in the air during tow (rudder goes back and forth without yawing the fuselage)?

- a. Release immediately.
- b. Check to be certain your spoilers are closed and locked.
- c. Move out to the left or right to indicate the direction you would like to be towed.

17. If the rope breaks or releases unexpectedly, what is the first thing you should do?

---

---

18. List all of the signs of an approaching stall you can think of.

---

---

---

19. What are the 5 things you must consider compensating for when making a turn?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

20. What is more dangerous, a slipping turn (not enough rudder) or a skidding turn (too much rudder, not enough bank)?

- a. Slipping Turn – Not enough rudder – Yaw String to outside of turn.
- b. Skidding Turn – Too much rudder – Yaw String to inside of turn.

21. Why is it important to check airspeed and coordination for base and final turns?

\_\_\_\_\_

22. If you need to adjust your typical medium bank angle in the pattern, is it safer to do shallow turns with 10 – 20 degrees bank angle or to do steeper turns with 40 – 50 degrees bank angle?

- a. Shallow Bank.
- b. Steeper Bank.

23. Describe how you should join other gliders in a thermal to take advantage of the lift.

\_\_\_\_\_  
\_\_\_\_\_

24. You realize you are far from the airport and want to get back losing as little height as possible. There is no wind and not much sink or lift. What speed should you use?

- a. Minimum Sink Speed
- b. Best L/D Speed
- c. Maneuvering Speed

25. You realize you are far downwind of the airport, in a 20 mph wind and encounter an area of severe sink. What should you do?

- a. Speed up even though that means you are coming down like a rock.
- b. Slow down to reduce the sink rate and conserve altitude.

26. You want to get home as fast as possible because rain is coming in. You have plenty of altitude, but it is pretty turbulent. What airspeed should you use?

- a. Best L/D Speed.
- b. Best L/D Speed plus  $\frac{1}{2}$  of the estimated head wind.
- c. Rough Air Speed.

27. After takeoff you notice that you have messed up and forgot to add ballast if you need it, or forgot to remove it if you do not need it. What effect will this have on the glider's flying characteristics? Do you require Ballast when flying solo? Effect of CG change on flight characteristics if you mess up

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

28. When you fly solo, the weight of the instructor will not be in the glider. How will this affect the glider's characteristics?

---

---

---

---

29. While concentrating on the maneuvers you are practicing, you realize you have become disoriented and are not sure where the airport is. What major landmarks near the Alexandria Airport can you use to locate the airfield?

---

---

30. You are on glide towards the airport, but you're not sure if you are going to make it. What are some ways of figuring out if you are making progress on your glide or if you should make the decision to land out before getting too low?

---

---

31. The wind often changes while you are in the air. List several ways of detecting wind speed and direction from the air.

---

---

32. While you are flying, the wind increases to 12 knots from the south and you are landing to the west. How will you modify your pattern and landing to account for the wind, and what common mistakes should you make sure to avoid?

---

---

---

33. We usually do left hand patterns at the Alexandria Airport. Can you make a right hand pattern and if so, what additional precautions might you take in doing so?

---

---

34. How can you find out if the weather conditions are going to be legal and safe for flying before leaving for the airport?

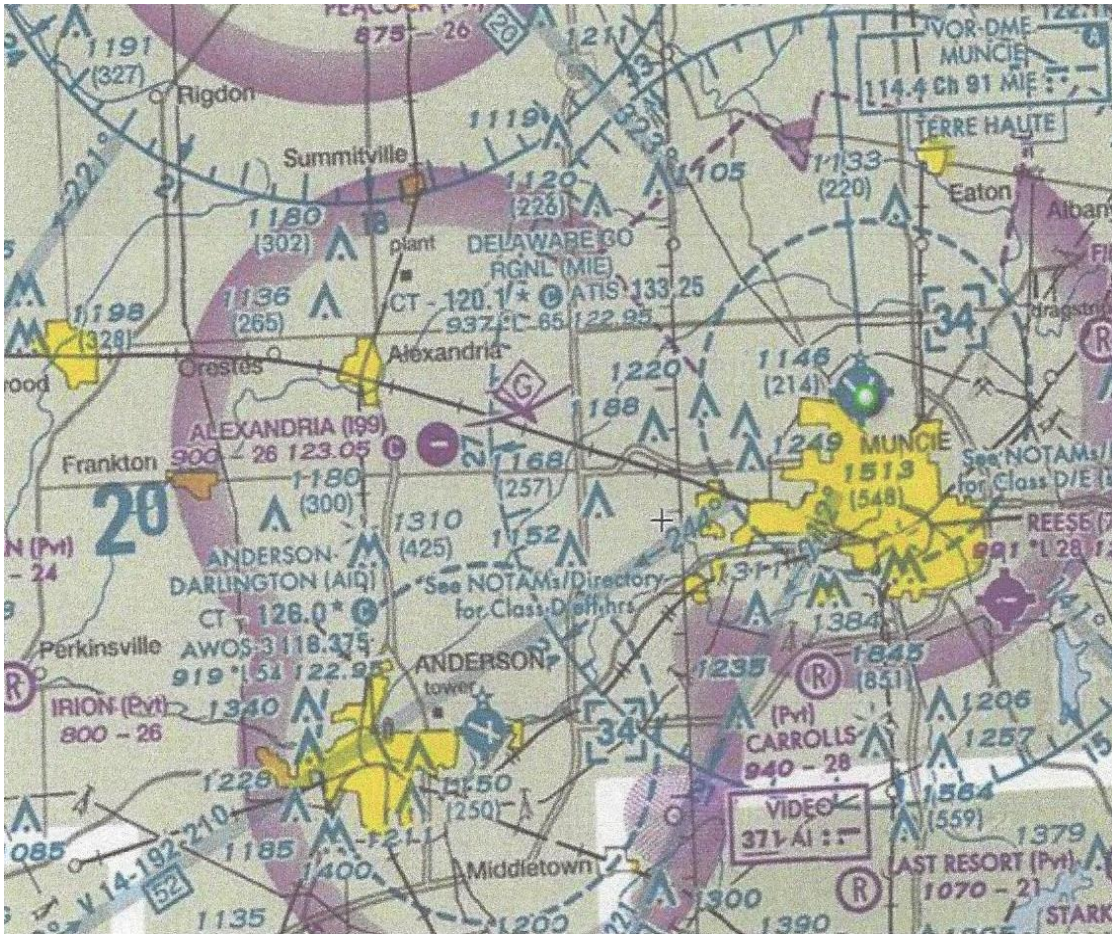
---

---

35. If the clouds look low or the wind seems strong when at the airport waiting to fly, how can you determine the current conditions for the Alexandria area?

---

---



Refer to the above selection from a sectional chart for questions 36 through 40.

36. Suppose you have to land at Anderson on a Sunday morning. What radio frequency do you use to find out about other traffic? What would you say on the radio?

---



---

37. What is the significance of the dashed 5 mile diameter circle around Anderson Airport?

---

38. What type of airspace are you in directly over Anderson Airport at 3500 ft MSL on a Monday afternoon at 2 pm?

- a. Class G
- b. Class E
- c. Class D

39. What is the runway length at Alexandria (I99) and what is the definition and significance of the "C" in the small circle just west of the airport?

---

40. You are flying over the city of Frankton southwest of Alexandria. What is the minimum altitude at which you would plan to start a final glide back to Alexandria Airport if you did not want to try to find a thermal on the way home? (assume the standard 50% safety factor for L/D)

---

# Schleicher ASK 21

## Performance Speeds

Best L/D Solo ..... at \_\_\_\_\_ kts  
Min Sink Solo ..... at \_\_\_\_\_ kts  
Stall Speed Solo with Spoilers Retracted .....  $V_{SO}$  \_\_\_\_\_ kts  
Never Exceed Speed .....  $V_{NE}$  \_\_\_\_\_ kts  
Rough Air Speed .....  $V_{RA}$  \_\_\_\_\_ kts  
Maneuvering Speed .....  $V_A$  \_\_\_\_\_ kts  
Maximum Aero Tow Speed .....  $V_T$  \_\_\_\_\_ kts  
Maximum Speed with Spoilers Extended ..... \_\_\_\_\_ kts  
Maximum Demonstrated Crosswind Component ..... \_\_\_\_\_ kts

- The recommended trim setting for takeoff is:
  - Between zero and nose heavy.
  - Between zero and tail heavy.
  - Within approximately  $\frac{1}{2}$  inch of the central zero position.
- At best L/D, calm air, no wind and a 50% safety factor you need \_\_\_\_\_ feet per statute mile.
- What pattern speed do you plan to use before adjusting for wind or turbulence? \_\_\_\_\_ kts.
- Instruments and Minimum Equipment required for day VFR flight in the Schleicher ASK 21 are:
  - Airspeed Indicator, Altimeter, Lap and Shoulder Straps.
  - Airspeed Indicator, Altimeter, Magnetic Compass, Lap and Shoulder Straps.
  - Airspeed Indicator, Altimeter, Variometer, Lap and Shoulder Straps.
- The required tow rope or weak link strength for the Schleicher ASK 21 is \_\_\_\_\_ to \_\_\_\_\_ lbs.
- The Schleicher ASK 21 must be aero towed using a tow rope with
  - A two piece Tost ring.
  - A single Schweizer ring.
  - Either a single Schweizer ring or a two piece Tost ring at the pilot's discretion.

## Weight and Balance

- What is the All Up Weight of the Schleicher ASK 21? \_\_\_\_\_ lbs.
- What is the permissible front seat weight? Minimum: \_\_\_\_\_ lbs.  
Maximum: \_\_\_\_\_ lbs.
- What is the weight and CG Location with you as the pilot, solo, in Schleicher ASK 21?  
Weight: \_\_\_\_\_ CG Location: \_\_\_\_\_
- Do you need ballast?  Yes  No If so, how much do you need?