Pre-Solo Written Exam

Taken by: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Reviewed by (CFI-G): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

Aircraft used for solo: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Basic flying and ground handling*.

1. Label the parts of the glider below:



2. Ailerons provide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ control around the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ axis.

3. The elevator provides \_\_\_\_\_\_\_\_\_\_\_\_ control around the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ axis.

4. The rudder provides \_\_\_\_\_\_\_\_\_\_\_ control around the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ axis.

5. What is the purpose of the yaw string?

6. What is the purpose of the spoilers or dive brakes on a glider?

7. Describe how the lift generated by the wing can be affected by the pilot of a glider.

8. Draw an airfoil and the airflow around it in a stalled condition.

9. List the classic 6 symptoms or warning signs of an impending stall.

10. Describe the danger of flying a glider with the center of gravity aft of the limit.

11. Describe the danger of flying a glider with the center of gravity forward of the limit.

12. What danger exists when a skidding turn is made?

13. Describe the correct procedure for stall recovery as well as spin recovery? How does a stall differ from a spin?

14. Describe what adverse consequence may occur when ailerons are used to level the glider’s wings while the wing is close to stalling.

15. Can the wing stall at a higher airspeed than the stall speed listed in the POH (Pilot Operating Handbook) for the glider you are flying? Why or why not?

*Fight characteristics and operational limits for the aircraft to be flown.*

16. What is the minimum and maximum front cockpit pilot weights for the glider you will solo?

17. What does “maneuvering speed” mean and what is that speed for the glider you will solo?

18. What does “never exceed speed” mean and what is that speed for the glider you will solo?

*FAR parts 61 and 91.*

19. What documentation must a glider have on board in order to fly?

20. What documentation must be on your person or accessible in the aircraft when you fly solo in a glider?

21. Does your student certificate expire?

22. A student pilot must have received a written logbook endorsement from a CFI within the preceding \_\_\_\_\_\_\_ days in order to continue flying solo.

23. At Mile High Gliding, a student must always receive the permission of a flight instructor before flying solo. This is not a question!

24. Briefly describe the purpose of each Federal Aviation Regulations part:

**FAR part 61:**

**FAR part 91:**

**FAR part 43:**

**FAR part 71:**

**NTSB part 830:**

25. Following an accident, a written report must be filed with the NTSB within how many days?

*Airspace rules.*

26. At Boulder airport below 1,200 feet AGL we are in class \_\_\_\_ airspace. Minimum flight visibility is \_\_\_\_ mile(s). Cloud clearance is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

27. At Longmont airport below 1,200 feet AGL we are in class \_\_\_\_\_\_ airspace. Minimum flight visibility is \_\_\_\_\_\_\_ mile(s). Cloud clearance is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

28. At Longs Peak, at 15,500 MSL (1,300 feet AGL), we are in \_\_\_\_\_\_\_ airspace. Minimum flight visibility is \_\_\_\_\_\_ mile(s). Cloud clearance is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

29. Above 10,000 feet MSL cloud clearances and visibility in class E airspace are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Flight visibility is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

28. Are gliders allowed into class A airspace? If so, under what conditions?

29. Are gliders allowed into class B airspace? If so, under what conditions?

30. Give examples of class A, B, C, D, E, and G airspace in Colorado.

31. At what time of day can you fly a glider?

32. What altitude considerations must we follow regarding the use of oxygen in gliders?

33. What is your before landing checklist in a glider?

34. What speed do you use on your approach in the glider you will solo?

35. How do you adjust your speed for different wind conditions on final approach to landing in the glider you will solo?

36. Describe the difference between a forward slip and a side slip, as well as the situations in which you might use either maneuver.

37. Where do you aim to land at Boulder airport when landing on Glider 8?

38. What do you do if you are ready to pull a glider out onto the runway but notice a gider turning crosswind overhead to land?

39. What do you do if you turn to final and a glider remains on the paved glider runway?

40. What is the L/D (lift over drag) speed of the glider you will be flying? What margins do you provide yourself regarding your expected glider performance?

41. Define best “speed-to-fly”.

42. How can you tell if you are on a collision course with another aircraft?

43. What are the minimum and maximum rope tow strength requirements?

44. What are “weak links” and when are they required for towing?

45. What is your emergency plan taking off to the east in a calm east wind?

46. How can you get slack in the tow rope?

47. How do you remove slack in the rope once it has formed?

48. How high do you enter the pattern at Boulder?

49. What will you do if you come in to land and notice you are lower than you normally are at a particular point in your landing pattern?

50. How do you obtain a weather briefing?

51. Describe what is meant by the following aerotow signals:

**Glider rocks wings.**

**Glider moves off to the side and then rocks wings.**

**Glider fishtails with tail moving back and forth.**

**Towplane fishtails with tail moving back and forth.**

**Tow plane waggles rudder rapidly back and forth.**

**Tow plane rocks wings.**

**Glider moves out of position to the right of the tow plane.**

**END OF TEST**

*Please review and correct this exam with an instructor and ensure it is scanned and added to your digital file. It is recommended that you keep this exam for your own records after it has been reviewed and scanned.*

***Fly good, don’t suck.***