

Pre-Solo and BFR Written

Choose the most correct answer:

1. While banking for a turn, the down aileron causes increased lift of the high wing. If you did not use the rudder, you could expect:
 - a) The nose to yaw to the inside of the turn
 - b) The nose to yaw to the outside of the turn
 - c) No adverse effects
 - d) Any of the above, depending on the conditions

2. VFR flight above 1,200 feet AGL and below 10,000 feet MSL, in Class E airspace, requires a minimum visibility and vertical cloud clearance of:
 - a) Three miles, and 1000 feet below or 2000 feet above the clouds at all altitudes within and outside of the controlled space
 - b) Five miles, and 1000 feet below or 1000 feet above the clouds at all altitudes
 - c) Three miles, and 500 feet below or 1000 feet above the clouds within controlled airspace
 - d) Five miles, and 1000 feet below or 1000 feet above the clouds only within the Continental Control Area

3. A sailplane pilot should do which of the following when flying his final approach into a 20 mph headwind and seems to be undershooting.
 - a) Raise the nose to slow the aircraft to just above stall speed and decrease the sink rate
 - b) Use spoilers
 - c) Lower the nose to increase the penetration
 - d) Stretch the glide by flying at minimum sink speed

4. To solo a glider, an applicant must be at least:
 - a) Old enough that he can see out of the canopy
 - b) 14 years of age
 - c) 16 years of age
 - d) No requirement concerning age

5. Consider the hazards of wake turbulence. The wing tip vortices trailing behind large airplanes in flight....
- a) are least severe when the large airplane is at low speed during climb after takeoff and approach for landing
 - b) will increase in intensity and violence as the speed of the large airplane increases
 - c) are most pronounced when the airplane is at low speed during climbs or approaches for landing
 - d) will present no hazard, so long as the vortices are encountered in level cruising flight
6. To operate an aircraft over any congested area, a pilot should maintain an altitude of at least:
- a) 500 feet above the highest obstacle within a horizontal radius of 500 feet
 - b) 500 feet above the highest obstacle within a horizontal radius of 1000 feet
 - c) 2000 feet above the highest obstacle within a horizontal radius of 1000 feet
 - d) 1000 feet above the highest obstacle within a horizontal radius of 2000 feet
7. Assume two aircraft of different categories are approaching head on at approximately the same altitude. Which of the following is a true statement?
- a) A jet airliner has the right-of-way over all other aircraft
 - b) An aircraft towing and refueling other aircraft does not have the right-of-way over all other engine driven aircraft
 - c) A glider has the right-of-way over an airship
 - d) Neither aircraft has the right-of-way and both aircraft should alter course to avert a collision
8. The main purpose of spoilers, dive brakes, and similar devices is to:
- a) Allow the pilot to slow up the aircraft without pulling back on the stick
 - b) Allow the pilot to adjust his angle of attack
 - c) Control stability about the lateral axis
 - d) Steepen the glide path still keep the speed under control

9. During aero tow you notice the tow plane rock its wings. This means:
- a) The tow plane has flown into moderate turbulence
 - b) The tow plane is in a thermal and you should release
 - c) The tow plane wants you to release immediately
 - d) You should assume low tow position
10. Who is responsible for determining whether an aircraft is in condition for safe flight?
- a) The maintenance man who maintains the aircraft
 - b) The pilot in command
 - c) The owner of the aircraft
 - d) The maintenance inspector
11. When conducting aero tow operations, your tow rope should have a breaking strength of:
- a) 1,200 pounds
 - b) Three times the certificated operating weight of the sailplane
 - c) Not less than 80% and not more than 200% of the certificated operating weight of the sailplane
 - d) At least twice the certificated operating weight of the tow plane
12. If you lose sight of the tow plane, on tow, you should:
- a) Use your dive brakes to get back into position
 - b) You should slip to get back into position
 - c) Use either a. or b. or a combination of thereof
 - d) Immediately release
13. When approaching to land at an airport without an operating control tower in Class G airspace
- a) Each pilot should make all turns to the right.
 - b) Direction of turns are at the pilots discretion.
 - c) Visual markings are always displayed indicating the direction of traffic.
 - d) Use left hand traffic unless otherwise indicated.
14. Part 830 of the FAR's contain what information?
-
-

15. If slack in the tow line occurs, what action should you take?

16. You are overtaking another plane on the ridge. You should pass on the_____ and know that_____ has the right-of-way.

17. Can you fly the ridge solo with a verbal o.k. from your instructor? _____ Why?_____

18. Name some surface wind indicators:_____

19. What is your pre-landing check list? Why do you use it?

20. Why should a pattern always be made for any type of landing?

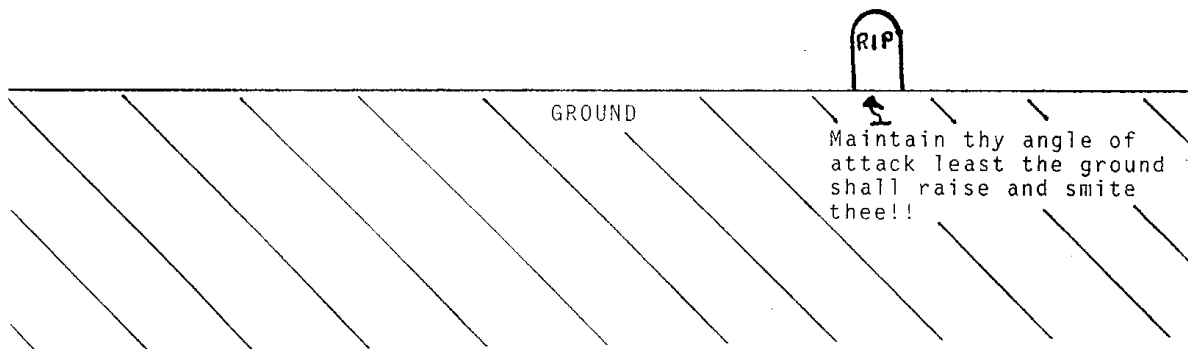
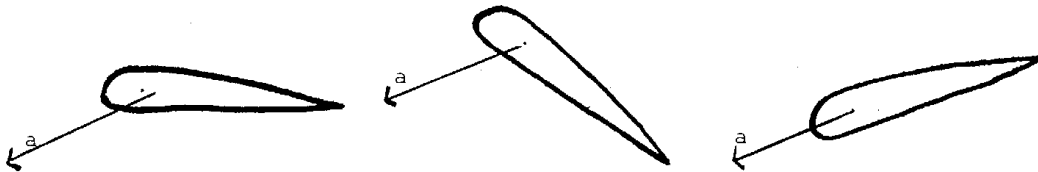
21. Which way should you circle when joining others in a thermal?

22. What do you always do before entering a turn or a stall?

23. Name the documents required on your possession and required in the sailplane during each flight. _____

24. Draw in and label "b" through "h" on each diagram below.

- a) Relative movement (sometimes called Relative wind)
- b) Chord line.
- c) Lift.
- d) Drag.
- e) Gravity.
- f) Angle of attack.
- g) Air flow.
- h) Separation point.



25. In addition to ABCCCD pre-take off list, what should you do?

26. If you have a rope break when departing runway 26 and the wind is 250 @ 20k what would you do:

a) At 100 feet AGL? _____

b) At 250 feet AGL? _____

c) At 500 feet AGL? _____

27. Name the five undesirable effects of a turn, and explain;
(from "Joy of Soaring")

a) _____

b) _____

c) _____

d) _____

e) _____

28. In case of emergency, what is the first thing you do? _____

29. What is a positive control check? _____

30. When do you use a forward slip & when do you use a side slip

31. Give the speed and define the following (assume you are flying a 2-33);

- a) Red line speed _____ mph _____
- b) Maneuvering speed _____ mph _____
- c) Best glide speed _____ mph _____
- d) Minimum sink speed _____ mph _____
- e) Stall speed solo _____ mph _____
- f) Stall speed dual _____ mph _____

32. What is the % increase of stall speed during a 45 degree bank turn: _____%

33. Using the weight and balance data, for the Schweizer 2-33 given below, determine:

- a) The total gross weight. _____
- b) Actual C.G. location. _____
- c) Is the gross weight within the allowable maximum? _____
- d) Is the C.G. within limits? _____

If not what can be done? _____

2-33 Weight and Balance data
Sample Aircraft

Range: sta. 78.20 to sta. 86.10
Maximum authorized gross weight: 1040 lbs.
Arm: sailplane empty 96.12
front pilot 43.80
rear pilot 74.70
Sailplane empty weight: 691 lbs
Pilots weights: front pilot 98 lbs
rear pilot 240 lbs

34. What do the FAR's say regarding the use of supplemental oxygen for pilot in command and for other aircraft occupants?

35. What conditions or circumstances might make a pilot or passenger susceptible to hypoxia at altitudes lower than the maximum altitude allowed for flying without supplemental oxygen?

36. Why does the stall speed increase, and why does an airplane stall more easily in a turn, than in level flight?

37. Explain "crab angle" and its use. _____

38. Explain the difference between a crab and a slip. _____

39. What makes an aircraft turn? _____

40. How close can you fly to cloudbase while ridge flying? _____

41. Describe a spiral dive and how you recover from one. _____

42. Describe a spin and how you recover from one. _____

43. According to the Soaring Flight Manual "Glossary of Terms" what is "Speed to Fly"?

44. According to the *Joy of Soaring*, what is a good rule of thumb for figuring "Speed to Fly in Wind" for a final glide?

45. While searching for thermal lift in the 2-33 you experience strong sink you know to fly what speed?

46. What are some of the advantages to diving into ground effect? _____

47. Describe a crosswind take-off and landing and explain the control usage. _____

48. How do you judge winds aloft, while you are in flight? _____

49. Describe the signal for the following commands.

- a) Take up Slack _____
- b) Take-off (glider) _____
- c) Tow Plane (response) _____
- d) Circuit _____
- e) Ridge _____
- f) Wave _____
- g) Slow Down _____
- h) Speed Up _____
- i) Emergency Release _____
- j) Can NOT release (Glider) _____
- k) Tow plane unable to release _____

50. At what altitude does Class A airspace begin and what are the requirements for flying within that airspace?
