

PRE-SOLO WRITTEN TEST

Instructions: Read each question carefully and choose the answer you feel is the one most correct.

1. According to the Federal Aviation Regulations, there are a number of documents that must be in the glider to legally fly. The minimum documents include:
 - a. Registration Certificate, airworthiness certificate, and aircraft logbooks.
 - b. Registration Certificate, airworthiness certificate, and operating limitations.
 - c. Registration Certificate, airworthiness certificate, and aircraft bill of sale.
2. A student pilot may log as solo time:
 - a. Only the time when the sole occupant of the aircraft.
 - b. Only the time a sole manipulator of the controls.
 - c. Only the time with an instructor.
3. As a student pilot, what documents must be in your possession while flying?
 - a. Student pilot certificate, and radio license if the glider is equipped with a radio
 - b. Student pilot certificate only.
 - c. None of these documents are required to be on your person while flying.
4. If, as a student pilot, you have not flown for 90 days, you:
 - a. Must pass a check ride given by a flight instructor.
 - b. Are legal to fly solo.
 - c. Must pass both a practical and written examination.
5. While flying, your notice a large twin engine aircraft approaching from your right on an apparent collision course. You know to:
 - a. Continue straight ahead since the glider has the right of way over all engine driven aircraft.
 - b. Give way to the twin because it is on your right and legally has the right of way.
 - c. Maneuver in any way you think is necessary to avoid a collision.
6. You have been instructed in ridge lift. While flying along the ridge, you seem to be overtaking another glider. Right of way rules require you to:
 - a. Pass on the ridge side.
 - b. Pass on the right.
 - c. Descend until you are below the other glider in case it should decide to thermal.
7. FARs mandate when two aircraft are approaching head on:
 - a. The smaller has the right of way
 - b. Each aircraft should alter its course to the right.
 - c. The larger aircraft has the right of way.
8. A landing aircraft has the right of way over:
 - a. Everything
 - b. Everything except the tow plane.
 - c. Only those craft which it has right of way over in cruising flight.

9. Maneuvering speed is:
 - a. The speed used to fly in the traffic pattern while maneuvering to land.
 - b. The speed used to fly while between thermals, searching for lift.
 - c. The speed which results in no damage to the aircraft when the controls are moved sharply or with full deflection.
10. The speed you should use to fly when searching for lift is:
 - a. Best L/D speed.
 - b. Best speed to fly.
 - c. Minimum sink speed.
11. Basic VFR minimums for controlled airspace are:
 - a. Visibility 3 statute miles or greater, 500 feet below, 1,000 feet above, and 2,000 feet horizontally from the clouds.
 - b. Visibility 1 statute mile or greater and clear of clouds.
 - c. Visibility 1 statute mile or greater, 500 feet below, 1,000 feet above, and 2,000 horizontally from the clouds.
12. After your instructor has endorsed your student license for solo, you:
 - a. May attempt a distance badge leg.
 - b. May fly cross-country only after your instructor has reviewed your preflight planning and endorsed your license and logbook.
 - c. May fly within a radius of 25 statute miles from your home base.
13. The final responsibility of determining whether an aircraft is safe for flight lies with:
 - a. A certified inspector.
 - b. The aircraft owner.
 - c. The pilot in command.
14. Unless otherwise indicated, all turns made in a traffic pattern of an uncontrolled field will be to
 - a. The right.
 - b. The left.
 - c. Either right or left depending on wind direction.
15. It is the responsibility of the pilot in command to familiarize themselves with which of the following before a local flight?
 - a. Weight and balance.
 - b. Operating limits of the aircraft.
 - c. Everything that pertains to the flight.
 - d. Weather reports.
16. Flying west in VFR conditions, you know there is an instrument approach course crossing your intended flight path. You know to:
 - a. Avoid this area to comply with FARs.
 - b. Exercise extreme caution since it is used for instrument approaches both in good and bad weather.
 - c. Fly normally because all aircraft under instrument approaches are under radar surveillance and are kept advised of other traffic.

17. During aerotow, you see the tow-plane violently rocking its wings. You know to:
 - a. Release immediately since this is the standard signal for tow plane in trouble.
 - b. Do nothing since the tow-plane pilot has probably encountered turbulence.
 - c. Release at your discretion since the tow-plane is signaling you of good lift.

18. Immediately after becoming airborne you have forgotten to remove the pitot system cover. You should:
 - a. Release and land straight ahead on the remaining runway.
 - b. Continue with the tow and set up a normal traffic pattern.
 - c. Continue with the flight since you know the pitot system works equally well with the cover in place.

19. While on aerotow, you discover you are unable to release the towline. You should signal the tow pilot by:
 - a. Fishtail back and forth using the ruder.
 - b. Fly to the left side position and rock your wings.
 - c. Descend into the low tow position and rock your wings.

20. Circling birds are often a sign of good lift. Upon encountering circling birds you should:
 - a. Circle below the birds as this will be the best area of lift.
 - b. Overtake them by flying above or off to the one side.
 - c. Avoid the area entirely.

21. Immediately after takeoff, halfway along a 3,000 foot runway, the towline breaks. The most likely correct emergency procedure is:
 - a. Extend the dive brakes and apply full aft elevator and opposite rudder to reduce speed, then land straight ahead on the remaining runway.
 - b. Use the higher than normal airspeed to gain altitude in order to make a 180 turn.
 - c. Lower the nose to maintain flying speed, extend the dive brakes and land straight ahead.

22. FARs concerning tow rope breaking strength require the rope to be:
 - a. Not less than 80% of the maximum certificated gross weight of the glider, and not more than 200% of this weight.
 - b. Not less than 80% of the actual flying weight of the glider and not less than 200% of this weight.
 - c. Not less than 100% of the actual weight of the glider, or more than 200%.

23. It is allowable to use a rope with a breaking strength of more than 200% if:
 - a. The total weight of the tow plane is less than 200% of the glider's weight.
 - b. There is a weak link installed at the glider end of the towrope.
 - c. There is a weak link installed on both ends of the towrope.

24. Over half of all aircraft accidents can be attributed to stalls. Regarding stalls you know that:
 - a. A stall is a function of angle of attack.
 - b. An aircraft can only stall below minimum sink speed.
 - c. An aircraft can only stall if the nose is above the horizon.

25. The primary tool in controlling angle of attack of the wing is:
- Airspeed.
 - Relative airflow.
 - Elevator.
 - Dive brakes.
26. The proper procedure to remove slack in the tow rope is:
- Yaw the nose of the glider away from the rope using the rudder while keeping the wings level.
 - Apply dive brakes to tighten the towline.
 - Climb to reduce speed and tighten the towline.
 - Release immediately.
27. If, during an approach using full spoilers, you flare too high, you may correct this problem and avoid a hard landing by:
- Close the spoilers and leave them closed until the glider is on the ground.
 - Close the spoilers, lower the nose to a gliding attitude, and perform another roundout, flare and land using the spoilers as necessary.
 - Lower the nose of the glider and force the glider on the ground as soon as possible using the elevator to keep the glider from bouncing into the air.
28. In order to comply fully with the FARs' concerning preflight duties, you must:
- Manually or mentally compute a weight and balance calculation before every flight.
 - Ascertain the glider is safe for flight before every flight.
 - Familiarize yourself with the current and forecast weather for the route of your intended flight.
 - All of the above.
29. Angle of attack is the angle:
- Between the relative airflow and the horizon.
 - Between the direction of motion and the horizon.
 - Between the airfoil and relative airflow.
30. The danger in making steep turns close to the ground lies primarily with:
- The possibility of turbulence or a strong wind gradient.
 - The need for excess speed.
 - The possibility of a button hook pattern.
31. The correct control position for a crosswind takeoff is:
- Upwind aileron deflected up, and rudder deflected downwind.
 - Upwind aileron deflected down, and rudder deflected downwind.
 - Upwind aileron deflected up, rudder deflected upwind.
 - Upwind aileron deflected down, and rudder deflected upwind.
32. The primary danger in making a downwind landing is:
- The illusion of high airspeed.
 - Ineffectiveness of the rudder.
 - Ineffectiveness of the wheel brake.
 - All of the above.

33. After releasing from tow, the glider pilot should:

- a. Initiate a climbing turn to the right.
- b. Initiate a level turn to the right
- c. Turn towards the gliderport.
- d. Turn towards the thermalling gliders.

34. The primary function of the rudder is to:

- a. Turn the glider.
- b. Counteract aileron drag.
- c. Assist in recovery from stalls and spins.
- d. Perform sideslips.

35. The primary function of the dive brake is to:

- a. Increase lift.
- b. Decrease drag.
- c. Increase drag.
- d. Increase glide ratio.

36. The main purpose of the elevator trim is to:

- a. Make the elevator more effective.
- b. Relieve some of the pressures on the control stick.
- c. Raise the nose of the glider.

37. You would correct the displaced yawstring pictured here by:



- a. Apply right rudder.
- b. Apply left rudder.
- c. Raise the nose attitude.
- d. Lower the nose attitude.

38. The airspeed indicator:

- a. Give instantaneous airspeed indications.
- b. Lags slightly in its indications.
- c. Displays a 'relative airspeed' indication.

39. Regarding frost on the wings you know:

- a. It is not necessary to remove frost because the wing will quickly clear during aerotow.
- b. You should remove all traces of frost before attempting a takeoff.
- c. You only need to remove the frost on the leading edge of the wing because this is where the majority of lift is created.

40. While attempting to land, you discover the dive brakes have frozen in the closed position:
- Continue the approach and descend using a sideslip.
 - Exert pressure on the dive brake control with you left foot.
 - Force the glider down with the elevator and ignore the increased airspeed.
41. In a 60 degree bank:
- Both you and the glider weigh twice as much as on the ground.
 - The load factor is 2.
 - The stalling speed increases by more than 40%.
 - All of the above.
42. Your glider is certified in which category?
- Normal
 - Utility
 - Acrobatic
 - High performance.
43. The signal to tell the towplane to turn right is:
- The glider moves to the right.
 - The glider moves to the left.
 - The glider moves to the right and rocks it's wings.
44. A parachute must be repacked by a certified rigger every:
- 60 days if it is a chair type.
 - 90 days if it is a back pack.
 - 120 days regardless of style.
 - None of above
45. Wave lift is indicated by which cloud?
- Cumulus
 - Lenticular
 - Shear line
 - Stratus
46. What is the best L/D speed for the two-place trainer you fly?
47. What is the maximum pilot weight flying solo for the two place trainer you fly?
48. What is the minimum recommended pattern speed for the two-place glider you fly?
49. What is the date of the last annual inspection for the two-place glider you fly?
50. Does the two-place glider you fly require a 100 hour inspection?