

## Alternate BFR Written

Instructions: Read each question carefully and circle the answer which you feel is the most correct.

1. According to Federal Aviation Regulations (91.203,91.9) there are a number of documents or certificates which must be in a glider to legally fly. They are:
  - a) Registration certificate, airworthiness certificate, aircraft logbooks, and owners manual
  - b) Airworthiness certificate, registration certificate, radio station license (if international), operating limitations in the form of charts or placards or owners manual, weight & balance information
  - c) Registration certificates, airworthiness certificate, aircraft bill of sale and at least one aeronautical chart for the route of your intended flight
2. At high density altitude and a given indicated airspeed which of the following statements is true?
  - a) True airspeed and ground speed decrease
  - b) True airspeed and ground speed increase
  - c) True airspeed and ground speed do not change significantly
  - d) True airspeed increases and ground speed decreases
3. How do variations in a sailplanes gross weight effect its glide ratio?
  - a) The lighter a sailplane is loaded the better its glide ratio becomes
  - b) Loading a sailplane to its maximum gross weight will not effect its glide ratio as long as you fly it at its maneuvering speed
  - c) Variation in gross weight does not effect the sailplanes glide ratio provided the optimum indicated airspeed for each gross weight is used
4. When entering a thermal occupied by other gliders, you Should:
  - a) Enter at least 500 feet below the other glider
  - b) Enter and turn in the same direction
  - c) Always turn to the left

5. If, as a licensed pilot, you have not flown in 90 days, and you wish to take a passenger along for a ride, as per FAR 61.57 you:
  - a) Must make 3 flights with a Certificated Flight Instructor who will then endorse your logbook for currency and for carrying passengers
  - b) Are legal to fly solo, but to carry passengers you must make 3 take-offs and landings within 90 days of the time you wish to carry passengers
  - c) Are still legal to carry passengers
  - d) Are still legal to fly solo, but to carry passengers you must take a 90 day check flight with a Certificated Flight Instructor(note: Sky Sailing requires 60 day currency to fly solo or carry passengers in rental gliders)
6. While flying you notice a large twin-engine aircraft approaching from your right on an apparent collision course with you. According to FAR 91.113, you know to:
  - a) Continue straight ahead since a glider has the right-of-way over all engine driven aircraft
  - b) Give way to the twin because he is on the right and legally has the right-of-way
  - c) Maneuver in any way you think necessary to avoid a possible collision
  - d) Perform some Dutch rolls to make your glider more visible
  - e) Although you have the right of way over most powered aircraft, you should maneuver to avoid a collision
7. You have been authorized to fly the ridge. While flying the ridge you wish to overtake another glider. Right of way rules state that you should:
  - a) Pass on the ridge side
  - b) Pass on the right
  - c) Descend until you are reasonably lower than the glider you wish to over take, then pass below him
  - d) Pass the other glider outside, away from the ridge
8. On final approach for runway 26, wind 240 at 15mph with spoilers fully deployed you see that you are too high. You should:
  - a) Crab the sailplane into the wind with left rudder and increase the airspeed to lose the excess altitude
  - b) Put the sailplane into a forward slip to lose the excess altitude with the right wing low and left rudder
  - c) Put the sailplane into a forward slip to lose the excess altitude with the left wing low and right rudder
  - d) The cross wind is too strong to fly the sailplane with cross controls. Increase the airspeed to lose the excess altitude

9. Maneuvering speed (VA) is:
  - a) The maximum speed used to fly in the traffic pattern while maneuvering to land
  - b) The maximum speed used to fly while between thermals while searching for lift
  - c) The maximum speed no damage to the aircraft if the controls are moved sharply or with full deflection
  - d) The correct speed to fly when entering into any acrobatic maneuvers
10. FAR 91.309 concerning tow rope strength state that the tow rope must be:
  - a) Not less than 80% of the total certificated operating weight of the glider & not more than 200% of this weight
  - b) Not less than 50% of the total gross weight of the glider and not more than 200% of this weight
  - c) Not less than 100% of the total certificated operating weight of the glider and not more than 200% of this weight
11. According to FAR 91.17, no person may act as a crew member of a civil aircraft
  - a) Within 12 hours after the consumption of any alcoholic beverage
  - b) While having a .05 percent by weight or more alcohol in the blood
  - c) While having a .06 percent by weight or more alcohol in the blood
  - d) Within 8 hours after the consumption of any alcoholic beverage or with a blood alcohol concentration of .04 or greater.
12. FAR 91.155 states that Basic VFR weather minimums for Class E airspace below 10,000 feet are:
  - a) Visibility 3 statute miles or greater, 500 feet below, 1000 feet above & 2000 feet horizontally from the clouds
  - b) Visibility 1 statute mile or greater and clear of clouds
  - c) Visibility 1 mile or greater, 500 feet below, 1000 feet below and 1000 feet horizontally from the clouds
13. One of the requirements for a strong mountain wave is:
  - a) Unstable lapse rate in the airstream disturbed by the mountains
  - b) Strong winds blowing at least 45 degrees from perpendicular across the mountain ridge
  - c) Wind speed at least 10 knots at the level of the summit of the mountain ridge. Upper winds should remain constant
  - d) Stable lapse rate in the airstream disturbed by the mountains

14. Non-Prescription drugs such as cold remedies are
- a) Harmless in moderate amounts
  - b) Safe for a healthy pilot
  - c) Potentially dangerous when flying
  - d) Not specifically covered by the FAR's
15. What are the symptoms of dehydration?
- a) Vision, judgment, memory, alertness, coordination and ability to make calculations are impaired. Headache, drowsiness and either euphoria or belligerence occur. Blue coloration of finger tips. Finally unconsciousness
  - b) Lightheadedness, suffocation, drowsiness, tingling in the extremities, and coolness. If allowed to continue disorientation and muscle spasms. Finally unconsciousness
  - c) Fatigue, dizziness, weakness, nausea, abdominal cramps, and extreme thirst. If allowed to continue on a hot day heatstroke and complete collapse is possible
16. When coming back from Mt. Palomar you notice that when flying at an appropriate and constant airspeed, your destination, Warner Springs Airport, is steadily moving up your canopy. You know that:
- a) You've got the airport made, no problem
  - b) You are a little bit low, but if you slow down you might be able to hold the sailplane up long enough to make it to the airport
  - c) You are too low to make it back to the airport.  
Forgive yourself for getting low and concentrate on making the best possible off-field landing
  - d) You are a little low but if you speed up you can at least get closer to the airport and keep looking for lift
17. Per FAR 91.409, an aircraft operated to carry passengers for hire must be inspected;
- a) Annually
  - b) Semi-annually
  - c) Annually plus every 100 hours of operation
  - d) Every 100 hours
18. While on aero tow you discover that you are unable to release the tow line from your glider. You should
- a) Fishtail back and forth using the rudder to unjam the release mechanism
  - b) Fly out to left side position and rock your wings using the ailerons to signal the tow pilot
  - c) Descend to the low tow position and rock your wings to signal the tow pilot
  - d) Break the rope

19. What is a good rule of thumb for speed-to-fly in wind on a long straight glide?
- a) Best gliding speed plus the estimated head wind velocity; for tail winds, best gliding speed
  - b) Best gliding speed for both headwinds and tail winds
  - c) Best gliding speed subtract half the estimated headwind; for tail winds, best gliding speed plus a quarter of the estimated tail wind
  - d) Best gliding speed plus half the estimated headwind; for tail winds, slightly slower than best gliding speed
20. Departing Warner Springs Airport on tow to the southwest you know that you are heading for the outer boundary of a MODE C VEIL. You know that:
- a) You are not allowed to cross that boundary without the appropriate ATC transponder and altitude reporting equipment
  - b) Sailplanes may cross the boundary, but the towplane, unless properly equipped with an ATC transponder and altitude reporting equipment, and ADS-B Out may not
  - c) The MODE C VEIL requirements for the use of an ATC transponder and altitude reporting equipment and ADS-B Out apply only to aircraft en route to San Diego Class B Airspace
  - d) Mode C & ADS-B Out requirements apply to all aircraft
21. The primary function of dive brakes is to:
- a) Increase lift
  - b) Decrease lift
  - c) Increase drag
  - d) Decrease your rate of descent
22. During an aero tow, you see the tow plane rocking its wings. You know to:
- a) Release immediately since this is the standard SSA signal for tow plane trouble
  - b) Do nothing since the tow plane has probably just encountered some light turbulence
  - c) Realize that your tow pilot has probably recognized a girl friend on the ground and is rocking his wing to say hello
  - d) Release at your discretion since the tow plane is signaling good thermal lift
23. The primary function of the rudder is to:
- a) Turn your aircraft
  - b) Counteract adverse yaw
  - c) Assist in the recovery from spins
  - d) Turn the aircraft on the ground

24. Useful Load is:
- a) The maximum amount of weight (people and luggage) that can be taken in a particular aircraft
  - b) The empty weight of the aircraft
  - c) Maximum weight that the aircraft is allowed to weigh
25. After take off at less than 200 feet, half-way down a 3000 foot runway your tow line breaks. The correct emergency procedure is to
- a) Extend the dive brakes and land straight ahead
  - b) Use your higher than normal speed to gain altitude in order to make a 180 degree turn back to the runway
  - c) Extend the dive brakes and apply full aft elevator and opposite rudder to reduce airspeed then land straight ahead on the remaining runway
26. Per FAR 91.126, unless otherwise indicated, all turns made in the traffic pattern of an uncontrolled airport should be to:
- a) The right
  - b) The left
  - c) Either the right or the left at the pilots discretion with regard for wind direction
27. Per FAR 91.113, a landing aircraft on final approach has the right of way over:
- a) Any other air traffic or those operating on the surface
  - b) Any other air traffic except the tow plane
  - c) Only those aircraft engaged in cruising flight
  - e) Any other aircraft airborne or operating on the surface except an aircraft in distress
  - f) Any higher/closer aircraft
28. Over one half of all accidents can be attributed to stalls. Regarding stalls, you should know that:
- a) An aircraft can stall at any airspeed or flight attitude but always the same angle of attack
  - b) An SGS 2-33, when flown solo, can stall only at 31 mph
  - c) An aircraft can stall only when the nose attitude is high with relation to the horizon
29. FAR 91.309 states that it is allowable to use a tow rope with a breaking strength greater than 200% of the total certificated operating weight of the glider if:
- a) There is a weak link installed at each end of the tow line
  - b) There is a weak link installed in the middle of the tow line
  - c) The total gross of the tow plane is less than 200% of the glider

30. The regulations pertaining to overdue aircraft and aircraft accident reporting procedures can be found in:
- a) Federal Aviation Regulation Part 61
  - b) Federal Aviation Regulation Part 91
  - c) National Transportation Safety Board Part 830
  - d) Airman's Information Manual Part 4
31. As per the FAR 91.211, when is supplemental oxygen required to be used by the Pilot in Command?
- a) Above 10,000 ft MSL
  - b) Between 10,000 ft MSL and 12,500 ft MSL if the duration is more than 30 minutes. Above 12,500 ft MSL at all times
  - c) Above 15,000 ft MSL
  - d) Between 12,500 ft MSL and 14,000 ft MSL if the duration is more than 30 minutes. Above 14,000 ft MSL at all times
32. While flying on tow on a gusty day you encounter strong turbulence. A big slack forms in the rope and the loop in the tow rope is almost to your wing. Describe what actions you could take depending on the severity of the situation:
- 
- 
- 
- 
33. If, during an approach using full spoilers, you have flared too high you may correct this problem and avoid a hard landing by:
- a) Opening and closing the dive brakes so as to affect the desired rate of sink
  - b) Close the dive brakes, regain your flying speed, then set up the flare again
  - c) Side slip to lose altitude and land
  - d) Lower the nose to add speed and set up the flare again
34. "Angle of attack" is the angle
- a) Between the wing chord line and the relative movement
  - b) Between the relative movement and the horizon
  - c) Between the direction of motion & the relative airflow
35. The correct control positions for the start of a cross-wind takeoff are:
- a) Upwind aileron and full downwind rudder
  - b) Downwind aileron and upwind rudder
  - c) Neutral aileron and neutral rudder
  - d) Upwind aileron and upwind rudder

36. In order to comply fully with the FARs 91.7 & 91.103 concerning Preflight duties, the pilot in command must:
- a) Make sure that the weight and balance are within allowable limits before every glider flight
  - b) Ascertain that the glider is safe for flight before every flight
  - c) Familiarize yourself with all available information concerning that flight including the current and forecast weather for the route of your intended flight.
  - d) All of the above
37. When using a pseudo-adiabatic chart we know that for air to be unstable
- a) The existing lapse rate must be equal to the dry adiabatic rate of cooling
  - b) The existing lapse rate must be equal to or less than the dry adiabatic rate of cooling
  - c) The lapse rate must be less than the dry adiabatic rate of cooling
  - d) The existing lapse rate must be equal to or greater than the dry adiabatic rate of cooling
38. During a turn you feel your body being forced to the right, and the yaw string displaced to the left, what must you do?
- a) Apply right rudder
  - b) Apply left rudder
  - c) Apply left aileron
  - d) Apply right aileron
39. Considering a 50% safety margin and minimum 1000 ft arrival altitude, a safe minimum altitude for an SGS 2-33 (L\D 23:1) (Best L\D speed 50 mph) 5 miles downwind(wind 10 mph) of Warner Springs Airport (elev. 2900) is:
- a) 6770 MSL
  - b) 5810 MSL
  - c) 5770 MSL
  - d) 3870 MSL
40. To make the tow plane turn to the right
- a) You fly to the left and line up the towplanes' tailwheel on the right main wheel
  - b) You fly to the right and line up the towplanes' tailwheel on the left main wheel
  - c) You fly out to the right and yaw the glider using the rudder
  - d) You fly toward the left of the towplane & rock your wings



41. While on a cross-country flight you conclude that you must land out. Below you is an airport within Class D airspace. According to FAR 91.129 and AIM 3-2-5, To land there you must:
- a) Establish two-way radio communications with the tower before entering the Class D airspace, and receive a clearance before landing
  - b) Obtain a clearance before entering the Class D airspace.
  - c) If you don't have a radio you may enter the Class D and land if it's an emergency
  - d) A and C
  - e) B and C
42. The main purpose of the elevator trim is to:
- a) Make the elevator more effective
  - b) Relieve some of the unnecessary pressure on the stick
  - c) Raise the nose of the aircraft
  - d) Raise the airspeed to maximum efficiency
43. FAR 91.307 prohibits you from carrying a synthetic-material parachute in your sailplane unless it has been packed by a certificated and appropriately rated parachute rigger within what period of time?
- a) 120 days
  - b) 180 days
  - c) 1 calendar year
  - d) 2 calendar years
44. During the night, frost formed on the wings of your glider. You know that:
- a) It is not necessary to remove the frost because it will blow off or evaporate once you are airborne
  - b) You should remove all traces of frost before attempting to make a takeoff
  - c) Remove most of the frost paying particular attention to the flat wing surface since this area would create the most drag
  - d) Remove most of the frost from the top surface of the wings since the top surface creates lift
45. After pulling the release and seeing the tow line snap back toward the tow plane you should
- a) Initiate a level right turn
  - b) Initiate a descending right turn
  - c) Initiate a climbing right turn
  - d) Initiate a left turn

46. While attempting to land, you discover that your dive brakes have frozen in the closed position:
- a) Continue the approach and descend using a forward-slip
  - b) Exert pressure on the dive brakes control with your left foot
  - c) Dive the aircraft to the ground and execute a normal landing flare
  - d) Make a 360 degree turn to lose altitude and then land
47. In a 60 degree banked turn:
- a) The load factor is 2 g's
  - b) The sink rate is over 180% more than wings level
  - c) The stalling speed increases by more than 40%
  - d) All of these
48. Wind gradient tends to be more extreme at
- a) Desert airports with few boundary hills, buildings & trees
  - b) Airports sheltered by trees, buildings and hills
  - c) Airports in mountain passes and canyons
49. In a glider equipped with a total energy probe, what variometer indication is expected while accelerating during takeoff before any climb is achieved?
- a) a climb indication
  - b) a descent indication
  - c) Only the glider's actual vertical speed
  - d) Depends on the wind
50. The proper sequence of control movements is essential in the recovery from a spin. They are
- a) Full aft elevator, full opposite aileron, pause, neutralize rudder and return to level flight
  - b) Full opposite rudder, forward elevator, pause, neutralize rudder and return to level flight
  - c) Opposite rudder and aileron, pause, neutralize rudder and return to level flight
  - d) Neutralize rudder, elevator and ailerons and wait for the aircraft to recover to normal flight
51. The bank angle that results in the least amount of altitude loss in a 180° turn is:
- a) 30° with a stall speed increase of nearly 10%
  - b) 45° with a stall speed increase of nearly 20%
  - c) 45° with a stall speed increase of nearly 40%
  - d) 60° with a stall speed increase of nearly 40%

52. While maneuvering in the traffic pattern, which error is most likely to result in a spin entry:
- a) Using too much inside rudder, skidding the turn
  - b) Using rudder opposite of the bank angle and slipping the turn
  - c) Using too steep a bank angle
  - d) Not using the proper wind additive to approach speed
53. Sky Sailing East wind operations employ a special takeoff and low-altitude emergency landing procedure, opposite direction takeoff and landing traffic, and require a signoff before performing without a Sky Sailing instructor.
- a) True
  - b) False
54. If the towplane stops climbing during your tow, you know that:
- a) You are being towed through air sinking faster than the towplane can climb and it's probably best to stay on tow.
  - b) You have reached the altitude you told the tow pilot to take you, continue until over the area you want to release at.
  - c) The tow pilot doesn't want to tow you any higher and you should get off.
55. Stall, Minimum Sink and Best Glide (Max L/D) speeds:
- a) Are indicated airspeeds, not affected by increased TAS at high altitude
  - b) Must be corrected for increased TAS at high altitude
  - c) Are the same regardless of weight
  - d) Increase at a constant rate of 0.5% per degree of bank up to 60°.