

# Pre-solo Knowledge Test

Name:	_____
N Number:	_____
Aircraft Make & Model:	_____
Date:	_____

This knowledge test is in two parts:

Part 1: A closed-book quiz, which you complete from memory.

Part 2: An open-book test, for which you can use any materials (FAR, AIM, POH, charts).  
Remember to quote your sources (e.g. FAR 91.13) when you answer.

Submit this test to your instructor, who will grade the quiz and discuss any answers that were incorrect.

Once your instructor is satisfied that you meet the conditions of the relevant FARs, s/he will endorse your logbook.

## Part 1: Closed Book Quiz

1. Define and list the following speeds for your aircraft:

	Definition	Speed
$V_{S0}$		
$V_{S1}$		
$V_x$		
$V_y$		
$V_A$		
$V_{FE}$		
$V_{NO}$		
$V_{NE}$		

2. What is the airplane's best glide speed? When is it relevant?

3. What is the procedure to recover from an inflight engine failure?

4. What is the procedure to respond to an engine fire on the ground during startup?

5. Describe the procedure for arriving at an airport with an operating control tower, if you are unable to establish two-way radio communications?

6. What is the procedure to recover from a spin?

## Part 2: Open Book Test

1. What personal documents are you required to have before you fly solo?  
(FAR \_\_\_\_\_)
  
2. What logbook endorsements are you required to have before you fly solo?  
(FAR \_\_\_\_\_)
  
3. What certificates or documents must be in the airplane when you are flying solo?  
(FAR \_\_\_\_\_)
  
4. What are your student pilot limitations regarding carriage of passengers or cargo and flying for compensation or hire? (FAR \_\_\_\_\_)
  
5. Explain student pilot limitations concerning visibility and flights above clouds.  
(FAR \_\_\_\_\_)



11. What is the minimum fuel reserve for day VFR flight? On what cruise speed is this fuel reserve based? (FAR \_\_\_\_\_)

12. While in the pattern at KEMT, the tower advises you that your transponder is inoperative. Can you still fly in the pattern? What about if you were leaving the pattern to go to the practice area?

13. Who has right of way when two aircraft are on final approach to land at the same time? (FAR \_\_\_\_\_)

14. What action do you need to take if you are overtaking another aircraft? Who has right of way? What should you do if you are flying on a head-on collision course with another aircraft? If another single engine aircraft is converging from the right, who has right of way? (FAR \_\_\_\_\_)

15. Except when necessary, for takeoffs and landings, what are the minimum safe altitudes when flying over congested areas and other than congested areas? (FAR \_\_\_\_\_)

16. If an altimeter setting is not available at an airport, what setting should you use before departing on a local flight? (FAR \_\_\_\_\_)

17. When practicing steep turns, stalls, and slow flight, your entry altitude must allow a recovery to be completed no lower than \_\_\_\_\_ feet AGL.

18. When is a go-around appropriate?

19. When are the navigation (position) lights required to be on? (FAR \_\_\_\_\_)

20. When is dropping objects from an airplane allowed? (FAR \_\_\_\_\_)

21. Draw the typical traffic pattern at an airport. Label all the legs, including the appropriate entry and departure points. What direction of turns is considered “standard”?
22. What is the minimum list of equipment that must be operational in your airplane for you to fly? (Hint: Use an acronym) (FAR \_\_\_\_\_)
23. What pavement marking tells you that you are required to stop before entering a runway?
24. When in contact with the ground and tower controller at an airport, what clearances are you required to read back?
25. You are at the terminal on the south side of KPOC and ask for taxi. The controller says “Skyhawk 12345. Taxi to runway 26R via Sierra”. Are you allowed to cross runway 26L? Explain your answer.

26. What is the oil capacity of your airplane? What is the minimum amount of oil with which you can fly?

27. Why is it necessary to drain the fuel out of the sumps after refueling and before the first flight of the day?

28. The total usable fuel for your airplane is \_\_\_\_\_ gallons. What is the fuel consumption rate for cruise at 75% power at 3000 feet with a temperature of 70°F?

29. What are the takeoff and landing distances over a 50 ft obstacle for your airplane at KEMT? Assume a temperature of 90°F, and an altimeter setting of 30.12.

30. What is the maximum flap setting for takeoff in your airplane?

31. How would you know if the alternator has failed inflight? Will your airplane's engine stop running if the alternator fails? Explain.

32. What will happen to the fuel gauges if your aircraft's electrical system fails in flight?

33. What are the indications of carburetor icing in your airplane? How would you identify that carb heat is working?

34. During a mag check, what is the maximum rpm drop for each magneto? How about the difference in rpm drop between the two magnetos?

35. What are the vertical dimensions of the airspace at KEMT? What happens to the airspace when the control tower is closed?

36. What are the vertical dimension of the airspace at KPOC?
37. While flying back to KEMT from the practice area, you call ATC for landing clearance and ATC advises "Cessna 19760. Standby". Can you enter the KEMT airspace?
38. Using just ground references, how would you identify the boundary of KEMT's airspace when returning back to KEMT from the north-east part of the practice area? Can onboard avionics help with making this identification? Explain.
39. What ground references would you use to identify the eastern, western, and southern boundaries of the Santa Fe dam practice area? What is the radio frequency for the practice area?
40. On a flight from KEMT to KCNO, at what altitude will you fly? Why?

41. What is the typical departure procedure you must follow when you depart from Runway 1 at KEMT?
42. What are the noise abatement procedures you must follow when you depart from Runway 26R at KPOC? How about from 26L? What ground reference do you use to initiate a turn to crosswind after departing from 26R at KPOC?
43. How would you fly from KEMT to KCCB? Describe the altitudes, communication that you would use, and ground references that you would use for the flight.

44. Describe the typical traffic pattern entry for runway 24 at KCCB when arriving from the practice area.

45. What are the radio calls that you would make while in the traffic pattern at KCCB (or any non-towered airport)?