

Pre-Solo Written Exam

According to §61.87(b), a student pilot must demonstrate satisfactory aeronautical knowledge on a knowledge test before solo flight.

1. How many hours must elapse between consuming alcohol and piloting an aircraft? _____
2. When you move the control wheel (yoke) to the left, will the left aileron move up or down?

3. True/False: The rudder is located on the horizontal stabilizer. _____
4. In addition to providing power to the propeller, what other functions does the engine perform?

5. What is the first indication of carburetor ice? _____
6. If the fuel grade specified for your airplane is not available, can you use a lower grade of fuel?
A higher grade? _____
7. Immediately after starting the engine, the ammeter shows a slight charge. Is this normal?

8. What is the atmospheric pressure and temperature at sea level in a standard atmosphere?

9. Which instrument(s) use the static source? _____

10. Which instrument(s) use the pitot tube?? _____

11. Identify the following V-speeds (meaning and value):

<u>V-Speed</u>	<u>Meaning</u>	<u>Value</u>
V_{SO}	Stall speed in approach configuration	_____
V_S	_____	_____
_____	Maximum flaps-extended speed	_____
V_{NO}	_____	_____
V_{NE}	_____	_____
V_A	Maneuvering speed	_____
V_X	_____	_____
V_Y	_____	_____

12. Identify the true statements from the following:
- a) During accelerated flight, thrust and drag are equal.
 - b) The angle of attack is the angle between the chord line and the relative wind.
 - c) As airspeed increases, the angle of attack at which an airfoil stalls also increases.
13. Identify three methods you can use to control lift during flight:
- _____
 - _____
 - _____
14. Is it more desirable for the wing root or wingtips to stall first? Why?
- _____
- _____
15. What is ground effect? _____
- _____
16. When landing in gusty winds, should airspeed be increased above or decreased below normal approach airspeed? Why? _____
- _____
- _____
17. List the basic guidelines for stall recovery. _____
- _____
- _____
- _____
18. Describe briefly the procedures for recovery from a spin. _____
- _____
- _____
- _____
19. What are the characteristics of an airplane with a center of gravity (CG) aft of the aft CG limit? _____
- _____
- _____
20. If angle of bank and altitude are held constant, what can be done to increase the rate of turn?
- _____
21. What is the most effective scan for aircraft during the day? Why? _____
- _____
22. How do you know when another aircraft is on a collision course with you?
- _____
- _____

23. An aircraft in an apparent collision course with you is at your "10 o'clock." Who has the right of way?

24. You are on a base leg, and you see an aircraft that has not been transmitting on CTAF come in low on final without following the aircraft in the pattern. Who has the right of way? What will you do? _____

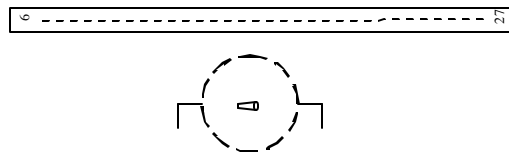
25. You and a helicopter are approaching head-on. Who has the right of way? _____

26. As a student pilot, are you allowed to fly above a ceiling in VFR conditions? _____

27. What is the minimum visibility requirement for solo flight as a student pilot? _____

28. What is the minimum recovery altitude allowed by the FAR when practicing slow flight, stalls, or other maneuvers? _____

29. You are approaching this airport at 3000 ft. AGL and plan on landing. Draw your course and label your altitudes (in AGL). Be sure to fly over the top of the airport to check the windsock!



30. What does red-over-red mean on the VASI? _____

31. When is a go-around appropriate? _____

32. Do you need a transponder to operate in class D airspace? _____

33. Describe the 6 classes of airspace and where they can be found: ·

34. What are the following frequencies?

Dallas Executive ATIS: _____

Dallas Executive Ground: _____

Dallas Executive Tower: _____

Midway CTAF: _____

Hicks CTAF: _____

Emergency: _____

35. If you are landing on runway 20 and the winds are out of 140° at 12 kts, what is the crosswind component? _____

36. Describe three things you can do if you are lost: ·

37. Describe your procedure if you have an engine failure:

38. When are you required to wear your shoulder harness?

39. What documents are required to be onboard your aircraft?

40. When can you deviate from an instruction from air traffic control?