

# Pre Solo Test

Name: \_\_\_\_\_

Instructor: \_\_\_\_\_

Date: \_\_\_\_\_ Corrected to 100: \_\_\_\_\_

## Limitations and Performance

1. Complete the following table

1.	Definition	Our Airplane
Vx		
Vy		
Va		
Vno		
Vne		
Vs		
Vso		
Vfe		
Vr		

2. What is the forward and aft limits of the airplane?

3. What is empty weight? What is the empty weight of this plane?

4. What is the max gross weight of the airplane?

Say you and a buddy (190lbs) need to fly to centennial and bring 175lbs of an unknown substance to KAPA Centennial airport. During preflight, the airplane has full fuel. With today's conditions from the airport you depart from, answer the following questions

5. What is the total weight of the airplane?

6. What is the CG

7. Are you within aircraft limits? Yes /No

8. If not, how could you adjust to be within limits? If so, would you complete this flight? (Based on aircraft performance)

9. What is the take-off distance for the aircraft? - Explain additional factors you adjusted for and their values

10. What FPM Climb can you expect?

11. If you burn 20 Gallons on the way to KAPA, what is the landing distance?

### **Weather**

1. What is the density altitude today?

2. How does density altitude affect performance?

3. What will the density altitude be 3 hours from now?

4. How can you mitigate risks associated with density altitude?

5. What is the maximum cross-wind component of the aircraft?

6. What happens when the dew point is close to the current temperature?

7. What is a temperature inversion? What are the hazards associated?

8. What things must be present for the formation of a thunderstorm?

9. How does a tailwind and headwind affect the performance of an aircraft on take-off, climb, cruise, and landing?

10. What is a Sigmet, Airmet, and Convective Sigmet?

11. Describe your process for obtaining the weather and forecast

12. Fill out the separate Personal Minimums Checklist sheet

All Done / what sheet? / I forgot

## **Regulations**

1. What is the Pilot in Command? (PIC)

2. In an in-flight emergency requiring immediate action, the pilot in command may deviate from any rule or regulation to the extent required to meet that emergency.

True/False

3. A student pilot may carry a passenger when:

- a) the student's flight instructor or his or her immediate supervisor approves the flight
- b) the passenger is sick and needs to be flown to a hospital
- c) the instructor doesn't know about it
- d) FORGET IT! This operation is NEVER allowed.

4. What is the minimum flight visibility for class E airspace above 10,000 feet MSL during the day?

- a) 1 mile
- b) 3 miles
- c) 5 miles

5. When is ADSB out required? What reg #?

6. What are the VFR Cruising altitudes? Reg #?

7. What is the minimum safe altitude anywhere?

- a) an altitude allowing, if a power unit fails, an emergency landing, no persons or property on the surface
- b) 500 hundred feet from the closest obstacle or person
- c) 1000 feet above, 2000 foot horizontal separation

8. What documents must you have to act as PIC/Solo?

9. What documents must the airplane have? Reg #?

10. What altitude must stalls and steep turns be performed? Ground reference? What altitude MSL is this for our area?

11. Who is the final authority in determining the airworthiness of an aircraft during a student's solo flight?

- a) The mechanic
- b) The Airport
- c) The student's flight instructor
- d) The student

12. A person acting as pilot in command of an aircraft may not have consumed alcohol within \_\_\_\_ hours or have a blood alcohol content of more than \_\_\_\_%

- a) 12, 0.04
- b) 12, 0.004
- c) 8, 0.04
- d) 8, 0.4

13. Define an aerobatic maneuver. Is the plane approved for aerobatic maneuvers?

14. When is it required to use supplemental oxygen? Reg #?

15. What is the minimum reserve fuel required for day VFR operations? On what speed is the fuel reserve based? Reg #?

16. Which inspections are required to maintain an airworthy aircraft and how often? FAR Reg #?

17. What are the right-away rules? Reg #?

## **Aircraft**

1. When is carburetor heat used?

- a) When it's cold outside
- b) Whenever the RPM is out of the green arc, or carb ice is suspected
- c) When the humidity is high
- d) It isn't important to remember

2. What is our airplane's best glide speed? When is it used?
3. State the procedure to respond to an engine fire on the ground while starting.
4. If you were to experience an engine failure while in the traffic pattern and there is already someone on approach, can you still land? What would you do?
5. List what CGUMPS checklist means in this airplane
6. What are the five "Cs" of a go-around?
  - a) Calm, Configure, Clear, Call, Climb
  - b) Cram, Climb, Clean, Cool, Call
  - c) Cram, Climb, Cool, Call, Clean
7. Before the "Clean" part of the go-around procedure, you should verify what?
  - a) Verify that the aircraft is climbing
  - b) Make sure that you notify CTAF or the Tower that you are going around.
  - c) Verify that you have positive airspeed
  - d) All the above
8. What are the 5'Cs of maneuvers?
9. What are the 2 methods of performing a clearing turn?
10. If oil temp reads high, what 3 actions can you take to resolve the issue?
11. Describe the flap settings and speeds for each leg of a traffic pattern in this aircraft

12. When is a go-around appropriate?
13. Will the engine still run if the master switch is turned off? Why?
14. If you see smoke coming from the panel, what does this indicate and what would you do?
15. During flight, you begin to see a gradual decrease in power, slight engine oscillations, or changes in engine pitch. What is a likely cause and what should be done to remedy the situation?
16. When would you use these transponder codes? 1200, 7500, 7600, 7700
17. What are the minimum and maximum oil and fuel capacities for your airplane?

### **Airport and Area**

(Phew, almost done!)

1. What is a runway incursion?
2. What are some possible runway incursions you foresee could happen at your local airport?
3. How do you prevent the possibility of a runway incursion occurring?
4. Draw a runway hold short line. When can you cross one?
5. What Runways do we have? How long? Is there a preferred take-off or landing runway? If so, why?
6. What is our field elevation?
7. What does CTAF mean? What is the local CTAF? What is UNICOM?

8. What is the emergency frequency and squawk code?

- a) 121.5, 7700
- b) 121.5, 1200
- c) 125.1, 7700
- d) 125.1, 1200

9. How do you enter a traffic pattern? How high AGL is a traffic pattern?

10. Describe a safe place to do a run-up

11. How do you scan for traffic? Is this important?

12. What are some operating concerns for maneuvers in our local area?

13. How would you find general North in our area, without the use of a compass? (Only looking outside)

14. When there is no AWOS information, what are some ways to determine wind direction?