

Isla Grande Flying School

and Service Corporation

Cessna 172S G1000 Equipment Test

It is a requirement to pass this test with a minimum of 70% prior to solo rental of a Cessna 172S equipped with the G1000

Note: Space provided between questions is not intended to answer each question fully. Use of additional paper is required.

GENERAL:

- 1. What is the prop ground clearance, under what conditions?**
- 2. What is the total fuel capacity?**
- 3. What is the usable fuel?**
- 4. Under what conditions will you ensure that maximum fuel capacity is achieved?**
- 5. What are the ramp weight, takeoff weight and landing weight?**
Ramp weight _____ Takeoff Weight _____
Landing weight _____
- 6. What is the maximum baggage weight in utility category?**

LIMITATIONS:

- 1. What is the maneuvering speed at normal category takeoff weight?**
- 2. Does maneuvering speed increase or decrease with lower weight?**

3. Can you open the cabin window at normal cruise speed?
4. What RPM can you expect if you fully open the throttle during the run up?
5. What is the aft CG limit in the utility category? Is this forward or aft the limits of normal category?
6. Is smoking allowed in the aircraft? Why or why not?

EMERGENCY PROCEDURES:

1. What is the procedure for a fire during engine start (memory items)?
2. List the procedure if a low voltage annunciator comes on during flight?
3. What gliding distance can be expected from 3500 feet? In what conditions?

NORMAL PROCEDURES:

1. What is the best rate of climb speed? Does it increase or decrease with altitude?

2. What is the maximum demonstrated cross wind component? Is this an aircraft limitation?
3. Should you start the engine with the mixture lean or rich?
4. Is it necessary to wait until all indications are in green prior to takeoff?
5. What lights are recommended for recognition in the traffic pattern?
6. What are the starter limitations?
7. Is it permissible to lean the mixture on the ground?

PERFORMANCE:

1. What is the service ceiling of the aircraft?
2. What is the required ground roll for a short field takeoff under the following conditions:
 - A) Temperature 25° C
 - B) Pressure Altitude 2500 feet
 - C) Headwind 9 knots

SYSTEMS:

1. How many volts and amps are comprised in the electrical system, main battery and alternator respectively?
2. How would you know if you have an alternator failure, or that it is not providing adequate power?

3. How many electrical busses does the aircraft have?
4. What is the purpose of the Essential bus?
5. What is the purpose of the standby battery?
6. Where is the standby battery located?
7. What would happen if the Standby battery switch is left in the OFF position?
8. What is the purpose of the ground service plug?
9. In the event that external power is required for engine start, What is the required voltage? What is the appropriate procedure for start-up, and after start-up while using external power?
10. How do you turn on the exterior courtesy lights?
11. Draw the fuel system
12. How many drain valves does the C-172S have? Where are they located?
13. When would the Low Fuel Left and/or Low Fuel Right annunciation be displayed in the PFD?

Avionics:

I. Describe the following G1000 components. (Location, function, purpose etc...)

1. GDU 1040 Color Display
2. GMA 1347 Audio Panel
3. GIA 63 Integrated Avionics Unit
4. GRS 77 Attitude Heading Reference System (AHRS)

- 5. GMU 44 Magnetometer**
- 6. GDC 74A Air Data Computer (ADC)**
- 7. GEA 71 Engine Monitor**
- 8. GTX 33 Transponder**
- 9. GDL 69A XM Weather and Radio**
- 10. Avionics Cooling Fan (Forward and Aft)**
- 11. Antennas**

II. G1000 Emergencies

- 1. If both the PFD and MFD go off during flight, to what frequency does the comm radio automatically go to?**
- 2. What is the purpose Reversionary Mode?**
- 3. If the PFD goes off during flight what comm radio is left available for use?**
- 4. If the MFD goes off during flight what comm radio is left available for use?**
- 5. What is the procedure for an Air Data Computer (ADC) failure?**
- 6. What is the procedure for an Attitude and Heading Reference System (AHRS) failure?**