Superior Flight School

Garmin G1000 Glass Cockpit Checkout Quiz

Name _____ Date _____

Certificate and Ratings _____ Certificate # _____

Total Time _____Total High performance_____ Complex_____

Define the following equipment terms:

- AHRS
- ADC
- TIS
- Terrain

Define the following navigation terms:

- TRK
- DTK
- VNAV

Describe the function of the following components of the G1000 Integrated Avionics System:

- GRS 77
- GMU 74
- GIA 63
- GDU 1040
- GTX 33
- GMA 1347

Is the aircraft required to remain stationary while the AHRS and ADC align?

Is there any warm-up time required for the engine instrumentation to be accurate?

What is the pilot action that should be taken if the MFD system self-test does not pass?

Where can you verify the effective dates of the Jeppesen database during the initial system start-up?

Describe the process for entering a newly assigned transponder code.

Is the active frequency being used displayed to the inside or to the outside relative to the bezel of the G1000 navigation displays (GDU 1040)?

In what color is the active frequency displayed?

How do you set and change radio frequencies

If the COM radio frequency toggle key is held for 2 seconds, what occurs?

Which key should be used on the audio panel (GMA 1347) to monitor a COM radio frequency without using it to transmit on?

Describe how the split COM feature works and provide at least one scenario of its use.

What purpose does the red button located at the bottom of the audio panel (GMA 1347) serve?

When the NRST softkey is pressed on the PFD, a list of the nearest airports appears, with runway length and tower/CTAF frequencies listed. How can the frequency be tuned in directly without tuning it into the COM radio?

Is the process to manually tune in the NAV frequency the same as it is to manually tune in a COM frequency? Is it the only way?

Does the G1000 system automatically attempt to identify the tuned NAV frequency? How is this visually presented?

Describe the process for canceling a direct-to GPS navigation.

Describe the process for entering a Flight Plan.

When using the Flight Plan function, does the unit auto-sequence the waypoints and does the autopilot continuously fly the programmed route?

Describe some of the advantages to using the Flight Plan function as opposed to continuous direct-to navigation.

Which main type of data is presented on the default MFD display?

What data types can be overlaid on the moving map? Where are the controls for this data overlay located?

How do you access the Nearest (NRST) pages?

Which key should be pressed and held for 2 seconds to automatically and quickly return to the Navigation Map page?

What type of data can be overlaid on the Map Inset?

From the PFD, can the pilot enter, view and edit a flight plan?

What happens when the HDG knob is pressed?

What happens when the CRS knob is pressed?

Where is the control for the altimeter barometric pressure located?

When a lighting bolt is changed to a “+”symbol, what does this change denote?

Is the terrain awareness feature in the G1000 system certified to allow deviations from the ATC assigned altitudes?

In the terrain awareness feature, what do the colors red and yellow each represent?

With TIS, when does the G1000 system provide an audible alert of “Traffic”?

Describe the indication(s) you would have from an electrical failure and troubleshoot.

Where would you verify that your vacuum pump had failed?

If your pitot tube had become plugged would your backup airspeed indicator be affected or would it just be the PFD that reads erroneously and what would you do about it?

Describe the action to take if the PFD fails?

If one display fails, which mode does the system automatically to into?

If the AHARS fails what would the indication be and what would you do?

If the ADC fails what would the indication be and what would you do?

When the AHRS and/or ADC fail, what remedial action should be taken by the pilot?

In flight, during a cross country, an AHRS failure occurs (failure indicated by a red X over the attitude indicator).

NOTE: Your aircraft is equipped with an autopilot which has its own rate-based gyro as well.

- Aside from the backup attitude indicator, what items can you use to ensure safe flight?
- What are your next actions concerning the completion of the flight? Note that, depending on the circumstances, the following action items may occur in a different order.
- When the AHRS fails, what is the other piece of information that is lost besides attitude?

IFR Questions

1.When filling a flight plan, what suffix is used when you have a current GPS database?

2. When can GPS be used in lieu of DME and ADF?

3. What does RAIM stand for? Describe its purpose.

4. You are on the RNAV (GPS) 09 approach into RYY and the system displays the "RIAM UNVAIL" alert inside the Final Approach Fix. The weather is reported as 500 feet overcast with 2 statue miles of visibility.

What action(s) do you take and why?

5. If the Jeppesen database is not current in the G1000, can the system still be used for IFR flight?

6. You are planning a flight to KNEW (Lakefront) from KRYY. When you arrive at the aircraft, you notice that the Jeppesen database data is out of date by 3 cycles (84 days).

- Can you make the flight under Instrument Flight Rules (IFR) ?
- What <u>enroute</u> flight planning considerations do you have to make?
- What <u>destination</u> flight planning considerations do you have to make?

7. What is the difference in how the HSI presents data between selecting Vectors-to Final and selecting an Initial Approach Fix during an instrument approach?

8. When navigating using the GPS, if an ILS, LOC, or VOR approach is selected, where is the frequency primary approach navigational aid automatically placed?

9. When flying an ILS approach, where do the glide-slope indicator and marker beacon annunciation appear on the PFD?

10. Can GPS be used to shoot a VOR?

11. Can GPS be used in lieu of DME when flying a DME arc associated with a VOR, LOC, or ILS approach procedure?

12. Where is the control for cycling between the GPS, NAV1 and NAV2 CDI selections that appear on the HSI?