WCFC Piper PA28 Warrior Quiz

Review before : 2025-10-11

Quiz ID : **16225**

Instructor :		Date :
Pilot :	Member # :	Score :

Instructor : Please note the final score (subtract 3.0 points from 100 for each wrong answer) on the checkout form and file the quiz in the Pilot Records folder.

---

1 : The maximum demonstrated cross-wind component for the PA-28-161 is

A : 12 knots

B : 15 knots

C : 17 knots

D : 25 knots

2 : According to this representation of the G5 is Electronic Stability Protection enabled or disabled?

A : Disengaged

B : Enabled

C : Disabled

D : Standby

3 : In the combination G5 and G500 autopilot installed in the WCFC PA28.161 Warriors, once engaged, the torque applied by ESP is at its maximum when bank angle ...

A : exceeds a prudent bank angle for more than 5 seconds

B : exceeds a roll rate of 45 degrees per second

C : is accompanied by a loss or gain of more than 175 feet of altitude

D : is 15 degrees more than the configured bank limit.

E : the trim malfunctions and produces a runaway condition requiring immediate disabling of the electric trim

4 : The correct type of fuel for the PA-28-161 (excepting any special STC) is

A : Aviation 80, 100LL, or 100/130 fuel

B : Automotive high test

C : Aviation 100LL or 100/130 fuel (100LL preferred)

D : Aviation 100LL (light blue) fuel only

5 : The engine in a PA-28-161 is a

A : Continental O-300

B : Lycoming O-320

C : Lycoming O-235

D : Lycoming O-540

6 : When the ESP system that is an integral part of the G5 and the GFC 500 AFCS has been engaged for more than 10 seconds (cumulative; not necessarily consecutive seconds) of a 20-second interval, what happens?

A : A warning alert "Pitch down" is heard.

B : Flight controls are locked for five seconds to prevent further excursions in pitch and bank

C : The autopilot is immediately disengaged, returning control to the pilot for safety.

D : The autopilot engages in Level (LVL) mode

E : The ESP system disengages to prevent over-driving the pitch and roll servos.

7 : According to the Warrior AFM/POH, engine fires during starting are usually caused by...

A : cranking the starter excessively, thus flooding the engine

B : priming with the auxiliary boost pump

C : attempting to start the engine with the magnetos energized

D : over-priming

E : allowing fuel to vaporize on a hot day

8 : If an electrical fire occurs, which sequence of actions is recommended?

A : Cabin vents should be opened. A fire extinguisher, if available, should be used to suppress the source of the fire. Turn off all electrics.

B : The master switch should be turned "OFF." Cabin vents should be closed. Land as soon as possible.

C : Pull all circuit breakers to isolate the source of the fire. Cabin vents should be closed. Land as soon as practicable.

D : The master switch should be turned "OFF." The Cabin vents should be opened. Cabin heat turned "OFF." A landing should be made as soon as possible

E : Turn off all non-essential electricals. Pull the flap circuit breaker. Land as soon as possible.

9 : Vfe, the maximum flap extension speed, in the Warrior is:

A : 111 knots KIAS

B : 103 KIAS

C : 73 KIAS

D : 126 KIAS

10 : The rated power of the engine as installed in a PA-28-161 is

A : 100 BHP

B : 125 BHP

C : 150 BHP

D : 160 BHP

11 : What would be the calculated cruise speed (True Airspeed) using the parameters below? (Use N8080A for performance calculations.)

- NOTE:
- Fuel to tabs (34 gallons usable)
- Wheel fairings not installed
- Max Gross Weight 2325 pounds
- Best power mixture setting
- 65% power
- 8000 foot pressure altitude
- OAT (at altitude) 40F

A : 122 knots TAS

B : 111 knots TAS

C : 113 knots TAS

D : 106 knots TAS

12 : Using the Performance Charts of the AFM/POH for N8080A, serial number 18-8016051, the true airspeed in cruise will be _____ under the following conditions ... (Use the original maximum gross weight of 2325 pounds.)

Condition	Data
Cruise Pressure Altitude	8,000 feet
OAT at cruise altitude	15 Celsius
Cruise Power	65% best power
Wheel fairings	not installed
Gross weight	2325 pounds

13 : How is a total loss of alternator output detected in the PA28-161?

A : A total loss of alternator output is detected through a zero reading on the voltmeter.

B : A total loss of alternator output is detected through a zero reading on the ammeter.

C : A total loss of alternator output is detected through a warning displayed on the SYSTEMS page of the GNS 650

D : A total loss of alternator output is detected by loss of the turn coordinator and the G5 attitude indicator and/or HSI if installed.

E : A total loss of alternator output is detected the popping of the ALT circuit breaker.

14 : What does STC SA00397NY, installed in some of the WCFC Warrior fleet, change about a PA28-161.

A : This STC approves the Garmin G5 electronic instrument to serve as the primary attitude indicator and fully replace the original vacuum-powered instrument.

B : The STC allows the installation of a smaller-diameter nose wheel to reduce the angle of attack on the takeoff roll and reduce the tendency to lift off prematurely in ground effect.

C : The STC grants permission to operate that serial number airplane at a maximum gross weight of 2440 pounds rather than the original 2325 pounds.

D : The STC allows the relocation of the battery from the firewall to an alternate location beneath the rear seat, which moves the CG aft (but within limits) to reduce drag and improve speed, fuel efficiency, and range.

15 : What would be the required fuel flow per hour and RPM setting to achieve 65% power at these parameters? (Use N8080A for performance calculations.)

- NOTE:
- Fuel to tabs (34 gallons usable)
- Wheel fairings installed
- Max Gross Weight 2325 pounds
- Best power mixture setting
- 65% power
- 8000 foot pressure altitude
- OAT (at altitude) 40F

A : 8.8 gph, 2530 RPM
B : 10 gph, 2530 RPM
C : 7.8 gph, 2580 RPM
D : 7.5 gph, 2600 RPM

16 : This G5 is configured with a ...

A : sky pointer
B : ground pointer

17 : What would be a minimally inconvenient loading change that would suffice to make this aircraft legally flyable?

item	weight	CG (arm)	Moment (/1000)
Airplane (80A)	1521.5	86.99	132.36
Front seat	220	80.5	17.71
Rear Seat	340	118.1	40.15
Fuel (pounds)	204	95.0	19.38
Baggage	100	142.8	14.28
Totals	2385.5	93.86	223.88

A : No change is necessary.Leave 50 lbs of baggage behind.

B : Leave 50 lbs of baggage behind.

C : Offload at least one passenger.

D : Have the kid and one 170 lb passenger exchange seats.

E : 2385.5 | 93.86 | 223.88

18 : Assuming that the configured bank limit of the ESP system is set at 45 degrees of bank, at what bank angle is the maximum torque reached?

A : it depends on whether the GPSS is engaged

B : maximum torque is whatever force required to counteract the pilot's effort

C : 60 degrees of bank

D : 30 degrees of bank

E : 15 degrees beyond the minimum torque setting

19 : The following numbers refer to the various sources of information in the standard G5 PFD presentation as installed in the Club Warriors and integrated with the G500 Garmin autopilot. Consult the diagram and refer to the numbered items. Please fill in the blanks. #15 is the _____. #17 is the _____. #14 is the _____. #19 is the _____ #20 is the _____.

20 : The type of oil normally in the engine should be ...

A : SAE rated SE (severe environment) multi-viscosity

B : Aviation grade ashless dispersant (AD) of appropriate viscosity

C : High quality automotive type high detergent (HD) motor oil

D : Aviation grade "straight mineral oil"

E : Aviation grade multi-viscosity synthetic oil

21 : Recommended short-field flap setting, rotation speed, and initial-climb airspeeds for a best obstacle clearance takeoff for the PA-28-161 are, in order:

A : 0 degrees, 50 KIAS, and 65 KIAS

B : First notch of flaps, 63 KIAS, and 65 KIAS

C : 25 degrees flaps, 52 KIAS, and 52 KIAS

D : 40 degrees flaps, 52 KIAS, and 79 KIAS

22 : What is the most current CG (Center of Gravity) in the WCFC record for N64TZ?

23 : Best angle-of-climb speed for the PA-28-161 at gross weight at sea level is:

A : 52 KIAS

B : 63 KIAS

C : 79 KIAS

D : Both (a) and (b) with and without flaps respectively

24 : The maximum gross takeoff weight for the CHFC PA-28-161 aircraft is

A : 2000 pounds

B : 2325 pounds

C : 2350 pounds

D : 2440 pounds

25 : When flying an autopilot coupled LNAV approach with vertical descent angle and the MDA set as an altitude preselect, what will the autopilot do at MDA?

A : The autopilot will level at the preselected MDA and continue to track the course guidance

B : The autopilot will alert arrival at the MDA and request further command

C : The autopilot will continue to descend on the vertical angle without leveling at the MDA

D : The autopilot will disengage

E : The autopilot will commence the missed approach

26 : Calculate the weight, CG, and total moment of N8080A using the data below. Choose the correct answer.

item	weight (pounds)	CG (arm)	Moment (/1000)
Airplane (80A)	1521.5	86.99	132.36
Front seat	220	80.5	17.71
Rear Seat	340	118.1	40.15
Fuel (pounds)	204	95.0	19.38
Baggage	100	142.8	14.28
Totals	---------	------	----------

A : Totals | 2385.5 | 90.23 | 223.88 |
B : Totals | 2385.5 | 92.86 | 221.51 |
C : Totals | 2585.5 | 93.86 | 242.67 |
D : Totals | 2385.5 | 93.86 | 223.88 |

27 : Using the Performance Charts of the AFM/POH for N8080A, serial number 18-8016051, the true airspeed in cruise will be _____ under the following conditions ... (Use the original maximum gross weight of 2325 pounds.)

Condition	Data
Cruise Pressure Altitude	8,000 feet
OAT at cruise altitude	15 Celsius
Cruise Power	65% best power
Wheel fairings	not installed
Gross weight	2325 pounds

28 : At 2000 pounds total weight, a reasonable approximate maneuvering speed for the PA-28-161 is

A : 76 KIAS
B : 88 KIAS
C : 102 KIAS
D : 111 KIAS

29 : At a cruise OAT of 40 degrees F, what would be the highest pressure altitude at which we can achieve 75% power according to the performance charts and abiding by the stated configurations and parameters?

A : Approximately 5000 feet

B : Approximately 6000 feet

C : Approximately 7000 feet

D : Approximately 8000 feet

E : Any altitude lower than 10,000 feet

30 : The active and armed modes, lateral and vertical, of the autopilot are displayed where?

A : Active modes are displayed on the HSI function of the installed G5

B : There is no separate display. The modes are recognized from the GFC 507 mode buttons, which turn red when engaged.

C : Adjacent to the GFC 507 AFCS in the GFC 500 screen

D : Autopilot (AP) status is displayed in the middle of the G5 Autopilot Status Box.

E : The autopilot (AP) modes may be displayed externally on an Ipad linked via Bluetooth to the GFC 500 AFCS system.