

**TRAVIS AERO CLUB OPEN BOOK TEST  
PIPER ARCHER III (PA28-181)  
01 JUN 2006**

***REFER TO PIPER ARCHER III POH P/N 761-868 FOR QUESTIONS 1-19 AND 25.  
REFER TO GARMIN 430/430A PILOT'S GUIDE AND REFERENCE FOR QUESTIONS  
21-22. REFER TO SYSTEM 55X AUTOPILOT POH FOR QUESTIONS 23-24. REFER TO  
AVIDYNE ENTENGRA EXP5000 PFD MANUAL FOR QUESTIONS 26-38, AND REFER  
TO AVIDYNE ENTEGRA EX5000 MFD MANUAL FOR QUESTIONS 39-50.***

1. What is the usable fuel capacity of the aircraft?
  - a. 50 gal
  - b. 40 gal
  - c. 48 gal
  - d. None of the above
  
2. What is the design maneuvering speed (Va) in KIAS with a gross weight of 2200 lbs?
  - a. 100 KIAS
  - b. 89 KIAS
  - c. 104 KIAS
  - d. 108 KIAS
  
3. If the engine does not fire within \_\_\_\_ seconds, disengage the starter, prime the engine and repeat the starting procedure.
  - a. 5-10
  - b. 6-9
  - c. 4-8
  - d. 3-7
  
4. What type of descent should normally be conducted in the Archer III? i.e. airspeed and RPM
  - a. 120 KIAS        2200 RPM
  - b. 110 KIAS        2000 RPM
  - c. 122 KIAS        2500 RPM
  - d. 115 KIAS        2300 RPM
  
5. What is the distance required to clear a 50 foot obstacle with the following data? (2240 lbs, Flaps: 25°, Temp: 17°C, Pressure Altitude: 5,500 ft., Headwind: 8 kts.)
  - a. 2000 ft.
  - b. 1700 ft.
  - c. 1500 ft.
  - d. 1600 ft.
  
6. What is endurance of the aircraft with the following data? (Max gross weight, 45 minute reserve, Pressure Altitude: 6,500 ft., Power: 65%, Mixture: Best Economy)
  - a. 3.9
  - b. 4.02
  - c. 4.05
  - d. 4.1
  
7. When the aircraft is fueled to the bottom of the indicator tab, there should be approximately 32 gal. of usable fuel.
  - a. True
  - b. False

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8. When should the electric fuel pump should be on?
  - a. Takeoff
  - b. Landing
  - c. Switching fuel tanks
  - d. All the above
  
9. This aircraft is equipped with a \_\_\_\_ volt electrical system, which includes a \_\_\_\_ volt battery for starting and to back up alternator output.
  - a. 12/14
  - b. 24/26
  - c. 28/24
  - d. 28/26
  
10. The maximum capacity of the baggage area is \_\_\_\_ pounds.
  - a. 120
  - b. 150
  - c. 175
  - d. 200
  
11. The air conditioning system is a recirculation air system. The major components are an evaporator, condenser, compressor, switches, temperature controls, and \_\_\_\_\_.
  - a. Blower
  - b. Heater
  - c. Fresh Air Vents
  - d. Vent Louvers
  
12. If the air conditioning system is not operating within \_\_\_\_ minutes, turn the system OFF until the fault is corrected.
  - a. 1
  - b. 3
  - c. 5
  - d. 7
  
13. Using the air conditioner causes a \_\_\_\_ decrease in airspeed and as much as \_\_\_\_ decrease in range.

a. 3 KTS	31 NM
b. 4 KTS	32 NM
c. 5 KTS	33 NM
d. 6 KTS	34 NM
  
14. The function of the split comm button on the GMA 340 audio panel is to allow the pilot to transmit on comm 1 and allow the co-pilot to transmit on comm. 2.
  - a. True
  - b. False
  
15. VFR flight is permitted with the MFD inoperative as long as it is cleared by maintenance.
  - a. True
  - b. False

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16. What procedures should be followed with a complete failure of the Attitude, Airspeed, and Heading Reference System (ADAHRS)?
- Pull and Reset PFD circuit breaker
  - Verify that the Standby Attitude Gyro is on and that the flag is pulled, if time permits PULL and RESET the PFD circuit breaker, and land as soon as possible if ADAHRS does not re-initialize.
  - None of the above
17. Any time the bus voltage is below \_\_\_\_ vdc, the low bus voltage annunciator will be illuminated.
- 20
  - 22
  - 25
  - 28
18. Starter manufacturer recommends that the starter cranking period be limited to 30 seconds with \_\_\_\_ minute rest period between cranking periods.
- 1
  - 2
  - 3
  - 4
19. The standby attitude indicator will operate for approximately 30 minutes on the internal battery, depending on the battery condition at the time of power failure.
- True
  - False
20. You can press and hold the VLOC flip-flop key to select the emergency channel (121.500 MHz).
- True
  - False
21. When you receive a DEGRADED ACCURACY message on the GNS 430 GPS, you should:
- Restart the GPS unit
  - Pull the circuit breaker to the unit
  - Cross check accuracy with another navigation source
  - None of the above
22. Using the trim switch on the control wheel while the pitch axis of the autopilot is engaged disconnects the autopilot.
- True
  - False
23. You receive a flashing "VS" annunciation on the System 55X Autopilot, what should you do?
- Ignore it
  - Adjust your power and/or VS command

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24. How would you disconnect the System 55X Autopilot?
- a. A/P Master Switch to OFF.
  - b. Autopilot disconnect/trim interrupt switch on the aircraft's control yoke.
  - c. Pull the autopilot circuit breaker
  - d. Activate the trim command switch on the aircraft's control yoke.
  - e. All the above
25. During an in-flight loss of main DC power, what are the procedures to activate the standby electric attitude indicator?
- a. Press and hold the STBY PWR button
  - b. Press the STBY PWR once
  - c. Press the STBY PWR twice
  - d. Leave it alone
26. Where would the ILS/LOC bugs be displayed on the PFD when you have an ILS/LOC approach frequency selected in the NAV section of the PFD?
- a. On the right hand side and the bottom of the HSI
  - b. On the right hand side and the bottom of the Attitude Indicator
27. How long will it be before the NAV and HDG Bug button are re-enabled after you have last pushed or rotated the knobs and buttons on the PFD?
- a. 10 seconds
  - b. 20 seconds
  - c. 30 seconds
28. To switch between Nav Source on the NAV, BEARING, and AUX section buttons on the PFD you would press either one of those buttons until the appropriate Nav Source is displayed on the HSI.
- a. True
  - b. False
29. To change the HDG Bug, VSI Bug, or BARO SET, you would press one of those buttons and turn the bug with the left knob.
- a. True
  - b. False
30. To set the ALT Bug to 10,500 feet you would:
- a. Press the ALT Bug once and turn the right hand knob to 10,500 feet.
  - b. Press the ALT Bug once and turn the left hand knob to 10,500 feet.
  - c. Press the ALT Bug once and turn the right hand knob to 10,000 feet, press the ALT Bug a second time and turn the right hand knob to 10,500 feet.
31. When are you allowed to taxi?
- a. During initialization
  - b. When it is OK to taxi
  - c. After the AHRS is warmed up and the PFD is displayed
  - d. Both B & C

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32. Which items would you use on the PFD to fly a constant rate turn?
- The black trapezoid on the Attitude Indicator
  - The Rate of Turn indicator above the HSI
  - Both A & B
33. How do you activate the GPS Roll Steering Mode (GPSS Mode)?
- Press the NAV button twice on the autopilot
  - Press the NAV button once on the autopilot
  - Press and hold the NAV button on the autopilot
34. How would you use the Altitude Capture Mode on the PFD and the autopilot?
- Set your Altitude and VSI bug and push the ALT button and then the VS button on the autopilot
  - Set your Altitude and VSI bug and push the VS button and when you reach your altitude press the ALT button on the autopilot.
  - Set your Altitude and VSI bug and push the ALT and VS button simultaneously on the autopilot.
35. Which one is NOT an Invalid Sensor or Error Condition?
- Invalid Air Data
  - Invalid Heading
  - Degraded Accuracy
  - Recoverable Attitude
36. When you receive a “CROSSCHCK ATTITUDE” alert display, what should you do?
- Ignore it
  - Scan all backup and auxiliary instruments
  - Use Autopilot (not HDG mode)
  - Both B & C
37. When a recoverable attitude data failure occurs, what should you NOT do?
- Maintain straight and level flight
  - Press the “FAST ERECT” button
  - Pull the PFD circuit breaker
  - None of the above
38. When engine data becomes unavailable, what should you do?
- Reset the PFD
  - Use the engine instruments on the MFD
  - Land as soon as possible
  - Both B & C
39. How would you adjust the range on the “Map” page?
- Turn the right hand knob on the MFD
  - Turn the left hand knob on the MFD
40. Where would you find your engine information on the “Map” page?
- Right hand side of the screen
  - Left hand side of the screen

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41. Where would you find your trip information on the “Map” page?
  - a. Right hand side of the screen
  - b. Left hand side of the screen
  
42. What are the errors displayed on the “Map” page?
  - a. Loss of GPS input
  - b. Loss of Heading input
  - c. Loss of Engine input
  - d. Both A & B
  
43. Which is NOT a setting on the Dedicated Traffic Page?
  - a. View: Center
  - b. Range: 5 NM
  - c. Base Map: Terrain
  - d. Declutter: No symbol or airspace depiction
  
44. Which page would you find your destination weather and destination airport information on the MFD?
  - a. Trip page
  - b. Nrst page
  - c. Aux page
  - d. Map page
  
45. Which page would you find METARS and TAFS from airports along your route?
  - a. Trip page
  - b. Nrst page
  - c. Aux page
  - d. Map page
  
46. Which page would you go to change the GPS Nav Source?
  - a. Trip page
  - b. Nrst page
  - c. Aux page
  - d. Map page
  
47. Fuel quantity to the “Tabs” on an Archer is 34 gal. On the Initial Usable Fuel Page on the MFD, how would you set the fuel to 34 gal?
  - a. Turn the right hand knob to 34 gal and press “Fuel Done.”
  - b. Turn the left hand knob to 34 gal and press “Fuel Done.”
  
48. How would you lean the aircraft to “Best Economy” using the “Lean Assist?”
  - a. Press “Lean Assist,” lean the engine until it says “Best Power,” then continue to lean to “Best Economy.”
  - b. Press “Lean Assist ,” lean the engine until it says “Too Lean,” then enrich to “Best Economy.”
  - c. Press “Lean Assist,” lean the engine until it says “Best Economy.”

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49. How would you lean the aircraft to “Best Power” using the “Lean Assist?”
- a. Press the “Lean Assist,” lean the engine until it says “Best Power.”
  - b. Press the “Lean Assist,” lean the engine until it says “Best Economy,” then enrich until it says “Best Power.”
  - c. Press “Lean Assist,” lean the engine until it says “Too Lean,” then enrich to “Best Power.”
50. Which display will show the current EGT temperatures at a zero point?
- a. Absolute
  - b. Normalize