

# **Beale Aero Club Aircraft**

## **Written Test**

# **PA-28 161**

# **Piper Warrior**

**(Required passing score: 80%)**

**THIS TEST IS NOT COMPLETE WITHOUT BOLDFACE/OPS LIMITS**

**\*\*PLEASE MAKE SURE ALL ANSWERS FOR THIS TEST ARE  
ON FORM 1584C- ANSWER BUBBLE SHEET LOCATED IN  
THE BEALE ONLINE LIBRARY\*\***

1. Engine oil quantity is a maximum/ minimum of \_\_\_\_\_ quarts.
  - a. 5/4
  - b. 8/6
  - c. 10/8
  
2. Maximum gross weight and maximum baggage weights are \_\_\_\_\_ and \_\_\_\_\_.
  - a. 2500/ 150
  - b. 2300/ 150
  - c. 2440/ 200
  
3. Maneuvering speed at 2440 lbs is \_\_\_\_\_ and 1531 lbs is \_\_\_\_\_.
  - a. 111 KIAS/ 88 KIAS
  - b. 99 KIAS/ 88 KIAS
  - c. 108 KIAS/ 89 KIAS
  
4. Engine fire during start is usually the result of:
  - a. over priming
  - b. broken fuel lines
  - c. electrical problems
  
5. If power loss occurs at low altitude, maintain an airspeed of \_\_\_\_\_ KIAS.
  - a. 65
  - b. 73
  - c. 80
  
6. If an engine failure was caused by fuel exhaustion, power will not be restored after switching tanks until empty lines are filled. This will require \_\_\_\_\_ seconds.
  - a. 5
  - b. 10
  - c. 15
  
7. Due to higher voltage and radio frequency noise, operation with the ALT switch ON and the BATT switch OFF should be made only when required by:
  - a. electrical failure
  - b. saving battery power
  - c. none of the above

8. Partial carburetor heat may be worse than no heat at all since:
  - a. it may melt part of the ice
  - b. cause the engine to run rough
  - c. it will have no effect on engine performance
  
9. The use of carburetor heat on the ground for prolonged periods should be avoided because the air is unfiltered.
  - a. true
  - b. false
  
10. The electric fuel pump should be in the "on" position for the following operations:
  - a. engine priming
  - b. takeoff
  - c. both a and b
  
11. When starting a flooded engine, the mixture control should be in which position?
  - a. full rich
  - b. idle cutoff
  - c. half lean
  
12. Check the magnetos during engine run-up at \_\_\_\_\_ RPM. The differential drop should not exceed \_\_\_\_\_ RPM and maximum drop on either magneto should not exceed \_\_\_\_\_ RPM.
  - a. 1700/ 75/ 125
  - b. 1800/ 50/ 150
  - c. 2000/ 50/ 175
  
13. The fuel selector should be on the \_\_\_\_\_ fuel tank prior to landing.
  - a. fullest
  - b. left
  - c. right
  
14. Initial approach speed is \_\_\_\_\_ KIAS while final approach speed is \_\_\_\_\_ KIAS with full flaps.
  - a. 70/ 63
  - b. 75/ 66
  - c. 85/70

15. At 2300 lbs, a pressure altitude of 4,000 feet, 60°F (15°C), 0° flaps, and 5 kts headwind; the takeoff ground roll and distance to clear a 50 ft obstacle should be \_\_\_\_\_ ft and \_\_\_\_\_ ft, respectively.

- a. 1300/ 2500
- b. 1500/ 2600
- c. 1600/ 2800

16. At maximum gross weight, a pressure altitude of 4,000 ft, and standard temperature, the rate of climb should be \_\_\_\_\_ FPM.

- a. 450
- b. 525
- c. 600

17. At gross weight, a pressure altitude of 5,000 ft, 80°F (26°C), 75% power (leaned for best power) best power will be obtained by setting the throttle to \_\_\_\_\_ RPM.

- a. 2450
- b. 2575
- c. 2650

18. Given the following conditions, the aircraft weight and balance is:

|              |            |        |          |
|--------------|------------|--------|----------|
| Empty weight | 1478.4 lbs | moment | 125871.0 |
| Pilot & pax  | 300 lbs    |        |          |
| Rear pax     | 180 lbs    |        |          |
| fuel         | 50 gallons |        |          |
| baggage      | 50 lbs     |        |          |

- a. within limits
- b. over gross weight and out of CG limits
- c. within gross weight and out of CG limits

19. This airplane is rated at \_\_\_\_\_ horsepower and \_\_\_\_\_ RPM.

- a. 145/ 2700
- b. 160/ 2700
- c. 180/ 2800

20. The fuel quantity is \_\_\_\_\_ total, \_\_\_\_\_ usable (all flight conditions) and \_\_\_\_\_ at the tabs.

- a. 36/ 34/ 20
- b. 52/46/ 38
- c. 50/ 48/ 34

21. The electrical system includes a \_\_\_\_\_ volt, \_\_\_\_\_ amperes alternator and a \_\_\_\_\_ volt battery.

- a. 14/ 60/ 14
- b. 14/ 60/ 12
- c. 12/ 30/ 12

22. The ammeter displays:

- a. battery voltage
- b. current flow to and from the battery
- c. load on the alternator

23. How are both the pitot and static lines drained?

- a. a lever on the back side of the pitot head
- b. through separate drain valves located on the left lower side of the fuselage interior
- c. they can't be drained

24. The stall warning horn is typically activated at:

- a. stall speed
- b. 5 to 10 kts below stall speed
- c. 5 to 10 kts above stall speed

(For question 25 refer to the Aircraft Supplements available in the Beale Online Library)

25. What information is given on the Aspen (EFD 1000 PFD) data bar?

- a. indicated airspeed, heading, altitude
- b. true airspeed, wind speed/ direction, ground speed
- c. true course, VOR frequency, wind correction