Aircraft Checkout Knowledge

Indicate aircraft type: ____________________________

Indicate which model/ year manual used: ____________

1. V-speeds (indicated)
   \[V_{SO} \text{ (flaps & gear)} \quad V_X \quad V_A\]
   \[V_S \text{ (clean)} \quad V_Y \quad V_NO \]
   \[V_R \quad V_{FE} \quad V_{Best \ glide}\]
   \[V_{LO} \text{ (if retractable gear)} \quad V_{YSE \ (multi \ eng)} \quad V_{approach}\]

2. The aircraft manual only gives “Short Field” takeoff distances, sometimes with and without flaps. How much do you increase your distance estimates for an ordinary, “Normal” takeoff?

3. What is this plane’s usable fuel capacity? (Full & any tabs, aux tanks if applicable)

4. How many gallons per hour does it burn @ full-power (100%) climb? (at lower altitudes)

5. How many quarts of oil maximum & minimum to fly? What SAE weight?

6. How many volts is the battery? Charging system volts?

7. Where are the battery and GPU socket?

8. What is the procedure for switching fuel tanks? When/ why would you?

9. What things should you do when an ammeter shows discharge, loadmeter zero, or volts show equal/ less than the battery rating?

10. What can you do if you have to follow slower traffic in the pattern?

While starting, you notice smoke or flame coming out of the cowling:

11. What is the most likely cause?

12. Why do you keep cranking?

13. What controls do you move while cranking?

14. How long do you crank before shutting down/ evacuating?

15. If it starts, how long @ what power do you run?

16. For the heaviest empty-weight plane of this type on our line, what's the most weight you can load besides fuel?

Heaviest legal landing weight?
17. Discuss with CFI for every plane of this type on our flight line: carburetor vs fuel injected, engine types/ rated power, and engine/ prop & mixture controls & settings for all phases of flight. **3 minute turbo cooldown after landing on turbo-charged engines.**

18. Discuss with CFI difference between "hot" and "cold" starts: summer vs winter, high altitude vs low, max & min amount of priming for each, and max & min RPM after start.

19. Discuss with CFI for every plane of this type on our flight line: number/ location of fuel sumps; number/ location of fuel vents; methods for switching tanks and turning fuel off.

20. Discuss with CFI the differences between each plane of this type on our line regarding; Basic Empty Weights, useful loads, and standard fuel levels set by Line Service.

21. Discuss with CFI for every plane of this type on our flight line: number of vacuum pumps; other attitude/ heading (or AHRS) systems and indicators.

22. Discuss with CFI for every plane of this type on our flight line: pitot & static systems and instrument displays; indicators, troubleshooting errors/ failures and backups; how static pressure is used by transponders and auto-pilots; stall awareness & indications.

23. Discuss with CFI hydraulic systems on this type, and any warning or backup systems.

24. Discuss with CFI differences between daytime traffic pattern operations vs when the tower is closed - application of A/FD published procedures.

25. Discuss with CFI: Phoenix Class B rules & proximity above and West; what to do if Tower assigns extended upwind from Runways 22, or extended downwinds in the north-side traffic pattern.

26. Discuss with CFI procedures for checking in/ out airplanes when Dispatch is closed.

**Applicable to all retractable-gear planes:**

27. Discuss with CFI: limiting speeds (max & min) for gear retraction & extension; order of configuration changes (gear, power, flaps, etc.) from cruise ("clean") to full-landing ("dirty").

28. Discuss with CFI: troubleshooting gear retraction & extension failures versus indications; use of tower and Falcon Exec guidance while still airborne; and methods for manual gear extension.

**Applicable only to multi-engine planes:**

29. Discuss with CFI: how much and why Vx & Vy change from normal to single-engine climb; and resulting change in performance at local airports versus higher altitude; effects of wt & balance.

30. Discuss with CFI: differences in "Accelerate-Go" vs "Accelerate-Stop" distances compared to rwy.

31. Discuss with CFI: planned engine-out procedures in-flight: no fuel selector off, throttle only below 3000' AGL, no engine cuts from half Vr to 500' AGL, etc.

32. Discuss with CFI: No touch & go's in turbo twins; taxi-back only with less than 3500' remaining.