

Knowledge Questions

At a minimum, the pilot must be able to answer these questions:

1. What is the total usable fuel?
2. What is the endurance with a one-hour reserve at 75% power (or Full Throttle/2500 RPM) at 8000 feet?
3. What is the maximum and minimum oil capacity in quarts?
4. How much payload can the airplane carry with all fuel tanks full?
5. How much fuel can you carry under the following conditions?
 - Total front seat occupants weight = 400 lbs
 - Total Seats 3/4 occupant weight is 300 lbs
 - Total aft baggage weight is 70 lbs
6. Assuming you load that amount of fuel for takeoff and with that cabin load, after burning 40 gallons of fuel will the center of gravity be within limits?
7. What is the maximum demonstrated crosswind component?
8. What are the indications of a vacuum/instrument air system failure?
9. What is your fuel management strategy for a four-hour flight?
10. When should you extend the landing gear during an instrument approach?
11. When should you extend the landing gear during a visual/VFR traffic pattern approach?
12. How do you verify landing gear extension?
13. When should you retract flaps after landing?
14. When should the cowl flaps be open?
15. How will you lean the mixture for takeoff? Climb? Cruise? Descent? Landing?
16. How many fuel drains are there?
17. What is the procedure for an unlatched forward cabin door on takeoff? In flight?
18. When and how do you use the auxiliary fuel pump?
19. From the moment you taxi onto the runway for departure, what is the sequence of events (airplane configurations, actions, airspeeds, attitudes) for a normal takeoff without obstacles?
20. What is the sequence of events for takeoff with a 50-foot obstacle at the end of a 3000-foot runway?
21. What should be your actions following a loss of engine power in cruise flight?
22. What should you do if the engine loses power immediately after takeoff?
23. What is the Emergency Descent procedure?
24. If the landing gear will not extend, what should you do?