

Freedom Flyers Renter Pilot Exam

Pilot _____ Type _____ Date _____

Fuel system:

1. How many fuel tanks are there?
2. What is the capacity of each tank?
3. What is the total usable fuel capacity?
4. What is the correct fuel grade? Color?
5. Where are the drains located??
6. When should a fuel sample be examined?

Oil System:

1. What is the minimum oil level? Max level? Normal level?
2. What is the recommended oil viscosity for all temperatures?

Weight and Balance:

1. What is the aircraft maximum allowable gross weight?
2. What is the standard empty weight of the aircraft to be flown?
3. What is the basic empty weight of the aircraft to be flown?
4. What is the weight of full fuel?
5. What is the aircraft useful load?
6. What is the aircraft payload?
7. Determine if the aircraft is within the weight and balance limitations given the following conditions:

Full fuel, front passengers = 340 lbs., baggage = 20 lbs., and for four place aircraft rear passengers = 150 lbs. Total, Yes/No?

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Airspeeds:

1. Stall speed in the landing configuration (V_{so})?
2. Never exceed speed (V_{ne})?
3. Max structural cruising speed (V_{no})?
4. Maneuvering speed (V_a) at max gross weight? Does V_a increase or decrease as gross weight decreases?
5. Max flap extended speed (V_{fe})?
6. Max gear extension speed (V_{le})? (Aircraft with retractable gear only)
7. Max gear retraction speed? (Aircraft with retractable gear only)
8. Best angle of climb speed (V_x) at sea level? V_x increases or decreases with altitude?
9. Best rate of climb speed (V_y) at sea level? V_y increases or decreases with altitude?
10. Demonstrated max crosswind component?
11. Normal final approach airspeed? Aircraft configuration?
12. Short field final approach airspeed? Aircraft configuration?
13. Best glide speed gear down? Gear up?

Emergency Procedures:

1. For aircraft with retractable gear, describe the emergency gear extension procedure.
2. For aircraft with carburetor, describe how you would detect carburetor ice, and what action should be taken to remove/prevent carburetor ice?
3. How would you detect an alternator failure, and what action would you take?
4. What actions would you take if you experienced an engine failure during flight?
5. What actions would you take if you noticed low oil pressure while in flight?
6. Describe the "go-around" procedure.

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Aircraft Performance:

1. What are the power setting, fuel consumption, and true airspeed for cruise at 75% power at 6,500 MSL at standard temperature?

MP? RPM? Fuel consumption? TAS?

2. What is the takeoff distance to clear a 50' obstacle when using maximum performance procedures with the aircraft at gross weight into a 6 knot headwind under the following conditions:

(a) Sea level, standard temperature: _____

(b) Pressure altitude 5,000; Temp 90 F.

3. Describe how you can determine pressure altitude.