

Cessna 310Q Multi Engine written test

1. Recite the V speeds.
2. What is the maximum demonstrated crosswind component?
3. Name and describe the Cessna 310Q engine.
 - A. How many cylinders?
 - B. Who is the manufacturer?
 - C. What is the horsepower rating?
 - D. Does it have fuel injectors or a carburetor?
 - E. Is the engine turbo-charged or normally aspirated?
 - F. Why is the right engine labeled LO-470?
 - G. How are the cylinders arranged?
 - H. How is ignition provided?
 - I. What are the minimum and maximum oil capacities in the Cessna 310Q?
4. Describe the propeller system.
 - A. Who makes the propellers?
 - B. What does oil pressure do to the propeller?
 - C. Which lever manipulates oil pressure to the propeller?
 - D. Which unit regulates oil pressure to the propeller?
 - E. What is the function of the nitrogen cylinder?
 - F. What is the purpose of the spring in the prop dome?
 - G. Define constant speed.
 - H. What unit adjusts the propeller to maintain a constant RPM and

how does it do it?

- I. Define full feathering.
 - J. Will the propeller always feather?
 - K. What are centrifugal stop pins?
 - L. What is the true purpose of the centrifugal stop pins?
5. What is the correct action for a propeller overspeed?
6. Describe the electrical system.
7. What are the indications of a failed alternator?
8. Will the engines continue to run with the alternator and battery master switches turned off?
9. Describe the vacuum system.
- A. Which instruments are vacuum operated?
 - B. What are the normal vacuum operating limits?
 - C. How many vacuum pumps does the CESSNA 310Q have?
 - D. What indications would occur in the event of a vacuum pump failure?
10. Describe the stall warning system.
11. Describe the fuel system.
12. Explain how to cross feed fuel.
13. Describe the landing gear system.

- A. How is the landing gear actuated? Describe the pump.
 - B. What keeps the gear in the up position?
 - C. What keeps the gear in the down position?
 - D. If Hydraulic pressure is suddenly lost in flight, what indication, if any, would you have?
 - E. In what three situations will the landing gear horn activate?
 - F. What unit will not allow the gear to be retracted on the ground?
 - G. What is the procedure to extend the gear manually (Emergency
 - H. What airspeed is of importance during manual gear extension?
 - I. Are the brake and the landing gear hydraulics interconnected?
 - J. If you lose gear hydraulics, will you still have brakes?
 - K. What indicates that the gear is in transit and the hydraulic pump
14. What type of braking system is used by the Cessna 310Q? Where is the brake fluid serviced?
15. What type of flaps does the Cessna 310Q have?
- A. What are the flap settings on the Cessna 310Q?
16. What are the maximum taxi, takeoff, and landing weights?
17. What is the maximum baggage capacity?
18. Define V_{sse} .
19. What are the drag factors on light twins?
20. Who determines VMC for a particular aircraft?

21. Define VMC.
22. Why is an aft CG used in determining VMC?
23. What are the factors in determining VMC?
24. Define critical engine and list the factors used to determine it.
25. What causes an aircraft to sideslip with the loss of an engine, and what action is required to correct this?
26. How much climb performance is lost when an engine fails?
27. What aircraft equipment checks are required under FAR part 91?
28. Define absolute and single-engine service ceiling.
29. What documents are required to be on the aircraft?
30. Explain lost communications procedures.
31. Will the propeller feather below 1000 RPM. Why or why not?
32. Explain the pitot static system.
 - A. Does the CESSNA 310Q have an alternate static source? If so, how is it
 - B. What instruments are pitot static?
 - C. Where is the pitot static port located?
33. How do you prevent a heater overheat?
34. What is the fuel capacity? How many gallons are unusable?

35. What grade fuel is to be used in the PA-44?
36. How many fuel pumps are on the aircraft?
37. When are the electric fuel pumps to be used?
38. What are the various positions on the fuel selector control?
39. Explain the procedure for cross feeding fuel when operating the right engine from the left tank.
40. If an engine failure occurred at 5,000' MSL, or a high density altitude, what would you do to get max performance from the operating engine after performing the In-Flight Engine Failure Checklist?
41. If the cylinder head temp and oil temp approach the caution range, what can be done to assist in cooling?
42. Why does manifold pressure decrease approximately 1" every 1,000' during climb?
43. When an engine is inoperative or feathered, what indication will be observed on the manifold pressure gauge?
44. Why is the manifold pressure gauge not necessarily a good indicator in determining an inoperative engine?

I have read and understand the Pilot Operating Handbook for this specific Make and Model aircraft. I understand each model may have differences including but not limited to airspeeds, fuel, and oil capacities, gross weight, etc, etc.

I will operate the aircraft within its limitations, using sound judgment and good common sense.

Pilot's Signature: _____

Differences discussed Yes/No Initials _____

I have personally checked and found Mr./Ms.

_____ Has passed the aircraft test and is competent to safely pilot this aircraft type.

CFI Signature _____

Certificate Number _____ Exp. _____