



BE76 Duchess Checkout Questionnaire

Name \_\_\_\_\_ Date \_\_\_\_\_  
Certificate and Ratings \_\_\_\_\_ Certificate # \_\_\_\_\_  
Total Time \_\_\_\_\_ Time in type: \_\_\_\_\_ Instructor (if applicable) \_\_\_\_\_  
ME Time \_\_\_\_\_

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**AIRSPPEEDS**

1. What are the following V speeds in KIAS?

Vr _____ (normal takeoff)	Vne _____
Vy _____	Vlo _____
Vyse _____	Vlr _____
Vx _____	Vmc _____
Va _____ (at gross weight)	Best Glide Speed _____
Vso _____	Landing Speed:
Vs _____	-With full flaps _____
Vfe _____	-With no flaps _____
Vno _____	Demonstrated crosswind component: _____

**EMERGENCY PROCEDURES**

1. Describe the emergency checklist to follow when an engine has failed during takeoff:
  - A. During rotation: \_\_\_\_\_
  - B. Below 1000' AGL: \_\_\_\_\_
  - C. Above 1,000' AGL: \_\_\_\_\_
2. What should we do if we experience low oil pressure and high oil temp?
3. What should be done if the ammeter indicates no output during flight?
4. Describe the 'Engine Fire During Start' procedure:
5. Describe the 'Fire In Flight' (engine fire) procedure:

## NORMAL PROCEDURES

1. List the procedures to be followed for a normal engine start?

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

2. Explain the procedure for starting a hot engine.

3. Prior to takeoff, what position should the fuel pump switches be on? \_\_\_\_\_.

4. Why do we lean the mixture? Describe the procedure.

## PERFORMANCE

Find: Takeoff Ground Roll under the following:      Airport: RYY    Zero Flaps    15 kt Headwind

P/A 1000'    Temp 15° C    Gross Weight      ANSWER: \_\_\_\_\_

To clear a 50' obstacle:      ANSWER \_\_\_\_\_

Accelerate stop distance:      ANSWER \_\_\_\_\_

Find: Landing Distance (50' Obst) under the following:      Airport: RYY    Full Flaps    10 kt Headwind

P/A 2,000ft    Temperature 20° C    @Gross Weight      ANSWER: \_\_\_\_\_

Find: The rate of climb with one engine inoperative under the following:

P/A: 2,000ft      Temperature: 20° C (90° F)      Gross Weight

ANSWER: \_\_\_\_\_

What is the climb gradient under these conditions?

ANSWER: \_\_\_\_\_%

ANSWER: \_\_\_\_\_ft/nautical mile

## WEIGHT AND BALANCE

1. What is the maximum weight for the following:

<i>Condition</i>	<i>Category</i>
Max. Ramp weight	Normal: _____
Max. Takeoff weight	Normal: _____
Max. Landing weight	Normal: _____
Max. Weight (Bag comp.)	Normal: _____

2. What is the floor structure load limit in pounds per sq foot?

3. In the following weight and balance sample; Is the airplane within weight and balance limits?

	<b>Weight (lbs)</b>	<b>Arm (in)</b>	<b>Moment(in-lbs)</b>
BEW	2666.3	110.1	293483.1
Pilot & Pass	430	108.5	46655
Rear Occupants	0	144	0
Baggage	0	167	0
Zero Fuel Weight	_____		
Zero fuel CG	_____		
Fuel@6 LBS/GAL(100gal max)	600	117	
Ramp Weight	_____		
Taxi Fuel Allowance	-16	117	-1872
Takeoff Weight	_____		
<b>CG Location</b>	_____		

## SYSTEMS

1. Describe the engines.
2. What are the engine's maximum rated horsepower and RPM?
3. What is the total fuel capacity? What is the total usable? How much fuel is in the tank if filled to the tab?
4. How many fuel drains are there? Where are they?
5. List the positions of the fuel selector
6. What types of fuel are approved and what are their colors?
7. What are the *normal* operating minimum and maximum oil capacities (*not POH minimum oil capacity*)?
8. Describe the electrical system.
9. What is the voltage of the battery? Where is the battery located in the aircraft?
10. How does the ammeter measure?
11. Does the aircraft have an alternate static source? If so, where is it, and how do you activate it?
12. Describe the flaps. How are they used? What are the settings? At what speed do you lower the flaps?
13. How can the electric elevator trim system be deactivated?
14. Describe the landing gear system to include the safety retraction switch.
15. What causes the gear horn to activate?
16. Describe the procedure to follow if the landing gear in-transit light remains illuminated after gear retraction.
17. How would you recognize a failure in the gear system and how would you extend the gear.?
18. What holds the gear in the up position?
19. Describe the propeller system?
20. How does the prop governor operate?

## SINGLE - ENGINE PROCEDURES

1. Define Critical Engine.
2. Does this airplane have a critical engine? Why or why not?
3. Define and list the factors of  $V_{mc}$ .

C

A

S

T

B

O

W

4. Define and diagram P factor.
5. Define and diagram torque.
6. Define and diagram accelerated slipstream

7. Define and diagram spiraling slipstream
  
  
  
  
  
  
  
  
  
  
8. Describe the procedures to follow in the event of an engine failure.
  
  
  
  
  
  
  
  
  
  
9. When you feather a propeller what happens?
  
  
  
  
  
  
  
  
  
  
10. How would you secure an engine?
  
  
  
  
  
  
  
  
  
  
11. What is the procedure to re-start a secured engine?

**Stall and Spin Awareness**

1. When do we recover from a stall and why?
  
  
  
  
  
  
  
  
  
  
2. What would happen to a stalled aircraft with a forward cg?
  
  
  
  
  
  
  
  
  
  
3. Describe the recovery procedure(s) for the following:  
Power-Off Stall: \_\_\_\_\_  
Power-On Stall: \_\_\_\_\_  
Spins: \_\_\_\_\_