**BFC KNOWLEDGE TEST**

**PLEASE READ: The first half of the test incorporates general knowledge questions. The second half of the test is airplane specific. Only answer the questions for the airplane/ airplanes you will fly. If you plan on flying the C-172’s, fill out answers for both C-172’s.**

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Which preflight action is specifically required of the pilot prior to each flight?

 A. Check the aircraft logbooks for appropriate entries.

 B. Become familiar with all available information concerning the flight.

 C. File a flight plan.

2. Who is responsible for determining if the aircraft is in condition for a safe flight?

 A. A certified mechanic

 B. The owner or operator

 C. The pilot in command

3. If an altimeter setting is not available before flight, to which altitude should the pilot

adjust the altimeter?

 A. The elevation of the nearest airport reporting barometric pressure.

 B. The elevation of the departure airport.

 C. Pressure altitude corrected for non-standard temperature.

4. What are wing-tip vortices (wake turbulence)? With which aircraft are they the greatest? Describe proper avoidance?

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5. Which instrument will become inoperative if the pitot tube becomes clogged?

 A. Altimeter

 B. Vertical Speed Indicator

 C. Airspeed Indicator

6. When taxing with strong quartering tailwinds, which aileron position should be used?

 A. Aileron down on the downwind side.

 B. Ailerons neutral.

 C. Aileron down on the side from which the wind is blowing.

7. When are you required to wear a safety belt? A shoulder harness?

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8. Which turn direction is standard for the BFL runway 30L traffic pattern? Which turn

direction is standard for the DLO runway 14 traffic pattern?

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9. List the documents that must be in the aircraft at all times.

A-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

R-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(R)-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

O-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

W-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. Which basic flight maneuver increases the load factor on an airplane?

 A. Climbs

 B. Turns

 C. Stalls

11. When can a student pilot carry passengers in the airplane?

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12. Which color on the airspeed indicator identifies the power-off stalling speed with wing flaps and landing gear in the landing configuration?

 A. Upper limit of the green arc.

 B. Upper limit of the white arc.

 C. Lower limit of the white arc.

13. In what flight condition must the airplane be placed in order to spin?

 A. In a steep diving spiral.

 B. Nose high attitude.

 C. Stalled.

14. What is the first action during a go-around?

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15. Minimum controllable airspeed is defined as?

 A. The speed at which the wings are no longer capable of supporting the weight of the airplane.

 B. Any speed below normal cruising range.

 C. The speed at which an additional increase in load factor or angle of attack, or

 power reduction, will result in a stall.

16. Name the instruments connected to the engine-driven vacuum suction system.

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17. If an in-flight emergency requires immediate action, a pilot in command may?

 A. Deviate from the F.A.R.'s to the extent required to meet the emergency, but must submit a written report to the Administrator(FAA) within 24 hours.

 B. Not deviate from the F.A.R.'s unless, prior to the deviation, approval is granted by the Administrator(FAA).

 C. Deviate from the F.A.R.'s to the extent required to meet that emergency.

18. Except when necessary for take-off and landing, what is the minimum safe altitude for a pilot to operate an aircraft?

 A. An altitude allowing, if a power unit fails, an emergency landing without undue

 hazard to persons or property on the surface, can be made.

 B. An altitude of 500 feet above the surface and no closer than 500 feet to any

 person, vessel, vehicle, or structure.

 C. An altitude of 500 feet above the highest obstacle within a horizontal radius of

 1,000 feet.

19. Will the engine run with the master switch turned off? Why?

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20. If an aircraft's radio fails, what is the recommended procedure when landing at a

controlled airport?

 A. Observe the traffic flow, enter the pattern, and look for a signal from the tower.

 B. Enter a crosswind leg and rock the wings.

 C. Flash the landing lights and cycle the landing gear while circling the airport.

21. A student pilot is required to have a valid student pilot certificate, logbook, government issued photo ID and current medical certificate in his/her personal possession:

 A. At all times.

 B. When acting as pilot in command during solo flight.

 C. Only if specifically required by the flight instructor who endorses the student for solo.

22. A third class medical certificate issued on May 3, 2014 would expire (if under the age of 40):

 A. May 3, 2019

 B. May 31, 2019

 C. May 31, 2016

23. Which aircraft has the right-of-way over all other aircraft?

 A. Balloon

 B. An aircraft in distress.

 C. An aircraft on final approach to land

24. Regulations require a fuel reserve of at least \_\_\_\_\_\_\_\_\_\_\_\_minutes for day VFR

operations, and at least \_\_\_\_\_\_\_\_\_\_\_minutes for night VFR operations.

25. In the event of a total electrical failure, which of the following items or systems will

become inoperative in the aircraft you currently fly?

 A. Flap extension/retraction system

 B. Attitude indicator

 C. Turn Coordinator

 D. Engine ignition system

 E. Fuel quantity indicators

 F. Rotating beacon

 G. Fuel selector

 H. Fuel Pump

 I. Tachometer

Signature of CFI\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Certificate No. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Expiration Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I have completed the above Written Examination and have received instruction in the areas that

I missed.

Customer Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**1979 C172 N3558E**

1. What are the following speeds:
 Vr
 Vy
 Vx
 Va
 Vs
 Vso
 Best Glide

2. What is the flap setting for:
 Normal Takeoff
 Short Field Takeoff
 Soft Field Takeoff

3. What is the gross weight of the airplane?
 Empty weight?
 Useful load?
 Does this differ from other C172 in Club? If so, how?

4. Do a weight and balance calculation for yourself, your spouse or buddy in the front seat, and two 170lb passengers in the back seat, with full fuel. Are you safe and legal to operate under these conditions? If not, why not, and what could you adjust to maintain safety?
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5. What is the takeoff and landing distances required under the following
conditions:
 90 degree F OAT
 Kern Valley Airport
 Wind 190@15

 Takeoff:            Landing:

6. Describe how to program the Garmin 430 for a 'direct to' flight from KBFL to Fresno.

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**1977 C172 N73977**

1. How do you adjust the volume on the Garmin GMA340 intercom for the passengers in the rear seats?

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2. If the GTN650 GPS has an expired database can you still fly the airplane VFR/IFR? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_What are the limitations, if any?

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3. Name 2 ways to go direct to an airport on the GTN650? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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4. How do you connect the #1 CDI to the GTN650 VOR or LOC radio?

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5. During engine run-up, when you do the mag check one of the mags has a 200 RPM drop. You suspect a fouled spark plug. How do you correct this?

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6. How do you detect carburetor ice inflight?

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7. What is the total fuel capacity? \_\_\_\_\_\_\_\_\_

8. What is the oil quantity for normal flights of less than 3 hours? \_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Extended flight? \_\_\_\_\_\_\_\_ What type of oil should you use? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. What is the useful load? \_\_\_\_\_\_\_\_\_\_\_\_What is useful load with full fuel? \_\_\_\_\_\_\_\_\_

10. Name 4 ways to turn off the Auto Pilot \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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11. If you suspect carburetor ice in flight, what is the proper procedure? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12. Inflight, the over voltage light illuminates. What is the procedure to correct this?

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13. What are the following speeds:
 Vr
 Vy
 Vx
 Vfe
 V approach

 Best Glide

**1977 C182 N759BN**

1. With a pressure altitude of 4000’, what manifold pressure setting and RPM setting would net a cruise speed of 133 KTAS at 20C above standard temperature?

2. What would be the fuel consumption at this setting?

3. What are the following speeds:
 Vr
 Vy
 Vx
 Vfe
 V approach

 Best Glide

4. What is max takeoff weight?

5. What is max landing weight?

6. What is max full fuel payload?

7. What are the minimum and maximum oil levels?

8. What grade of oil is used in N759BN?

9. If you took off from BFL at max take off weight, could you fly directly to MIT and land legally?

 Why?

10. What is the correct position for the fuel valve after parking?

11. How many hours can the plane fly at standard temperature, 8000 ft. altitude and 65% power setting? Allow for a 45 min reserve.