

**Wings of Carolina Flying Club
Cessna 152 Written Test**

Pilot _____ Member Number _____ Date _____

Instructor _____ Score _____

Instructor: Please note the final score (subtract 3.125 points from 100 for each wrong answer) on the checkout form and file the quiz in the Pilot Records folder.

Pilot: Information required to correctly answer the following questions may be found in the C-152 POH, the WCFC SOPs, and club checklists, documents and instructional practices. Select the most correct answer for each question.

1. Which engine is installed in the Cessna 152?
 - a. Lycoming O-235-N2C.
 - b. Lycoming O-235-L2C
 - c. Lycoming OI-235-N2C.
 - d. Lycoming OI-235-L2C.
2. What is the rated horsepower of the engine?
 - a. 98 BHP at 2550 RPM.
 - b. 100 BHP at 2550 RPM.
 - c. 108 BHP at 2550 RPM.
 - d. 110 BHP at 2550 RPM.
3. What is the acceptable oil quantity for the C-152?
 - a. Four to six gallons.
 - b. Four to six pints.
 - c. Four to six quarts.
 - d. Four to six liters
4. The normal type of oil used in the C-152 is:
 - a. High quality automotive multi-grade high detergent type.
 - b. SAE rated SE (Severe Environment) type multi-viscosity.
 - c. Aviation grade ashless dispersant (AD) of appropriate viscosity.
 - d. Aviation grade "mineral" engine oil.
5. Which of the following is the proper fuel for the C-152 (with no STC)?
 - a. 100.
 - b. 100LL.
 - c. Automotive low-lead.
 - d. Both a and b.
6. The maximum certified weight(s) for the C-152s are:
 - a. Ramp 1675; takeoff 1670; landing 1670.
 - b. Ramp 1680; takeoff 1670; landing 1670.
 - c. Ramp 1680; takeoff 1675; landing 1675.
 - d. Ramp 1675; takeoff 1675; landing 1670.
7. The maximum weight allowed in the baggage areas is:
 - a. Baggage area one 100 pounds.
 - b. Baggage area two 60 pounds.
 - c. Total baggage area (one and two) 120 pounds.
 - d. Total baggage area (one and two) 160 pounds.

8. The white arc on the airspeed indicator defines:
 - a. V_{no} to V_{s1} .
 - b. V_{ne} to V_{fe} .
 - c. V_{fe} to V_{so} .
 - d. V_{le} to V_{lo} .
9. The green arc on the airspeed indicator defines:
 - a. V_{no} to V_{s1} .
 - b. V_{ne} to V_{fe} .
 - c. V_{fe} to V_{so} .
 - d. V_{le} to V_{lo} .
10. What is the maximum recommended turbulent air penetration speed for the C-152?
 - a. All weights 104 KIAS.
 - b. All weights 104 KCAS.
 - c. 1670 lbs, 104 KCAS; 1500 lbs, 98 KCAS; 1350 lbs. 93 KCAS
 - d. 1670 lbs, 104 KIAS; 1500 lbs, 98 KIAS; 1350 lbs. 93 KIAS.
11. What is the recommended airspeed for steep turns?
 - a. 65 knots.
 - b. 85 knots.
 - c. 95 knots.
 - d. 105 knots.
12. What is the total/useable fuel capacity for the WCFC C-152s?
 - a. 26 gallons, 24 gallons useable.
 - b. 26 gallons, 24.5 gallons useable.
 - c. 39 gallons, 38 gallons useable.
 - d. 39 gallons, 37.5 gallons useable.
13. After starting the engine, oil pressure:
 - a. Will register immediately.
 - b. Should begin to register within 90 seconds.
 - c. Must register within 30 seconds in the summer and 60 seconds in the winter.
 - d. Must register within 60 seconds in the summer and 90 seconds in the winter.
14. The maximum demonstrated crosswind velocity for the C-152 is:
 - a. 12 knots.
 - b. 14 knots.
 - c. 15 knots.
 - d. 17 knots.
15. When should you lean the fuel mixture?
 - a. During all operations at any altitude when operating at 75% or less power.
 - b. Only when absolutely necessary it may foul the plugs.
 - c. Only when established in cruise flight above 5000 feet.
 - d. Only at high altitude airports.
16. Which of the following approach and landing speed combinations is correct?
 - a. Normal flaps 20; airspeed 65 KIAS.
 - b. Short Field flaps 20; airspeed 54 KIAS.
 - c. Soft Field flaps 30; airspeed 75 KIAS.
 - d. Normal, short field, and soft field techniques are all correct.

17. Which set of procedures are the proper procedures for a balked landing (go around)?
- | | |
|---|---|
| <p>a. Throttle ----- full
 Carburetor heat ----- off
 Flaps ----- retract to 20°
 Speed ----- 55 KIAS
 Flaps ----- Retract slowly</p> <p>c. Throttle ----- full
 Carburetor heat ----- off
 Speed ----- 55 KIAS
 Flaps ----- retract to 10°
 Flaps ----- Retract slowly</p> | <p>b. Carburetor heat -----off
 Throttle----- full
 Flaps----- lower to 20°
 Speed ----- 55 KIAS
 Flaps----- Retract slowly</p> <p>d. Throttle----- full
 Flaps----- lower to 20°
 Carburetor heat -----off
 Speed ----- 55 KIAS
 Flaps----- Retract slowly</p> |
|---|---|

18. What are the stall speeds for a C-152 under the following conditions?
 Forward center of gravity
 Flaps up
 0° and 60° of bank

- a. 36 KIAS and 51 KIAS.
- b. 40 KIAS and 57 KIAS.
- c. 35 KIAS and 49 KIAS.
- d. 48 KIAS and 68 KIAS.

19. Given the following data, is the C-152 aircraft within legal weight and moment limits? (Show your work)

Item	Weight (lbs)	Moment (in-lbs)
Basic Empty Weight 4640B	1168.4.	35,578.0
Fuel Full tanks	_____	_____
Pilot	190.0	_____
Passenger	150.0	_____
Baggage Area I	15.0	_____
Baggage Area 2	4.0	_____
TOTALS	_____	_____

- a. Weight within limits, moment within limits.
- b. Weight within limits; moment outside of limits.
- c. Weight outside limits; moment within limits.
- d. Weight outside limits; moment outside limits.

20. Given the following data, is the C-152 aircraft within legal weight and moment limits? (Show your work)

Item	Weight (lbs)	Moment (in-lbs)
Basic Empty Weight 89433	1,124.1.	33,794.6
Fuel Full tanks	_____	_____
Pilot	200.0	_____
Passenger	170.0	_____
Baggage Area I	25.0	_____
Baggage Area 2	10.0	_____
TOTALS	_____	_____

- a. Weight within limits, moment within limits.
- b. Weight within limits; moment outside of limits.
- c. Weight outside limits; moment within limits.
- d. Weight outside limits; moment outside limits.

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21. What is the approximate ground roll/takeoff distance over a 50 ft obstacle given the following?
- | | | | |
|-------------------------|-----------|----------------------|---------------------|
| Aircraft weight _____ | 1670 lbs | Temperature _____ | 30° degrees Celsius |
| Pressure Altitude _____ | 1000 feet | Wind speed _____ | 23010 |
| Runway number _____ | 22 | Runway surface _____ | Grass |
- a. 810/1495 feet..
 - b. 890/1645 feet.
 - c. 922/1614 feet
 - d. 1126/2080 feet.
22. In the C-152, the stall warning horn comes on:
- a. During the inboard stall.
 - b. During the outboard stall.
 - c. At 0 to 5 knots before the stall.
 - d. At 5 to 10 knots before the stall.
23. Spin recovery procedures in a C-152 are:
- a. Ailerons neutral, throttle, apply and hold full rudder in the direction of rotation, control wheel briskly forward, hold until rotation stops, smoothly recover from the resulting dive.
 - b. Ailerons neutral, full throttle, apply and hold full rudder opposite to rotation, control wheel briskly forward, hold until rotation stops, smoothly recover from the resulting dive.
 - c. Ailerons neutral, throttle idle, apply and hold full rudder opposite to rotation, control wheel briskly forward, hold until rotation stops, smoothly recover from the resulting dive.
 - d. Ailerons neutral, throttle idle, apply and hold full rudder opposite to rotation, hold until rotation stops, smoothly recover from the resulting dive.
24. Which of the following statements concerning the fuel system is false?
- a. Fuel flows by gravity from two wing tanks to a fuel shutoff valve.
 - b. Fuel pressure increases when the selector is on either tank.
 - c. Fuel system venting is essential to system operation.
 - d. Fuel quantity is measured by two float-type fuel quantity transmitters.
25. What is the landing roll for the C-152 given the following?
- | | | | |
|-------------------------|--------------|----------------------|-------------|
| Aircraft weight _____ | 1670 lbs | Temperature _____ | 30° Celsius |
| Pressure Altitude _____ | 1000 feet | Wind direction _____ | 350° |
| Wind speed _____ | 12 knots | Runway number _____ | 31 |
| Runway surface _____ | Dry Pavement | Speed _____ | 54 KIAS |
- a. 468 feet.
 - b. 520 feet.
 - c. 1270 feet.
 - d. 1295 feet.
26. Using the requirements of WCFC SOP (not student pilot) what is the approximate maximum range you can fly a Club C-152 under the given conditions?
- | | | | |
|-------------------|----------|----------------|---------------|
| Wind _____ | calm | Fuel _____ | full at start |
| Temperature _____ | standard | Altitude _____ | 6000 feet |
| Power _____ | 60% | | |
- a. 190 nm.
 - b. 260 nm.
 - c. 330 nm.
 - d. 400 nm.

27. What is the best glide speed and flap configuration for the C-152:
- 55 KIAS and flaps up.
 - 55 KIAS and flaps at 10 degrees.
 - 60 KIAS and flaps up.
 - 60 KIAS and flaps at 10 degrees.
28. In a C-152, the ammeter and low voltage warning light may indicate electrical power system problems. If the ammeter shows an excessively high rate of charge that continues for more than a few minutes after engine start, you should:
- Turn off the alternator switch, reduce the electrical load, and land as soon as practical.
 - Ignore it. Breakers have been built into the system for shorts. It usually indicates items such as the landing light are on.
 - Attempt to recycle the over-voltage relay by turning off the radios, and then recycling the master switch.
 - Turn the master switch to off and land immediately.
29. The C-152 electrical system is a:
- 12 volt, direct current system with a 24 volt battery.
 - 12 volt, direct current system with a 12 volt battery.
 - 16 volt direct current system with a 24 volt battery.
 - 28 volt direct current system with a 24 volt battery.
30. During the before takeoff magneto check, which of these statements is true?
- Set engine RPM at 1700.
 - Magneto drop should be a maximum of 125 RPM.
 - Magneto drop difference should be no more than 50 RPM.
 - All of the statements above are true.
31. What frequency and transponder codes are used for emergencies?
- 121.5 and 7700.
 - 125.1 and 7700.
 - 121.5 and 7600.
 - 125.1 and 7700.
32. What would indicate carburetor ice?
- A sudden increase in oil pressure.
 - An immediate complete loss of engine power.
 - A gradual loss of RPM.
 - A gradual increase in oil pressure.