Phase 1: Pre-Flight

Valley Fliers
1402 Auburn Way North, #223
Auburn WA 98002

Name: _____

Certificate Number: _____

Instructor: _____ Certificate Type: _____

Ratings: _____

_____

Check Out Date: _____ Total Flight Time: _____ Last 90 Days: _____

Club check out is in two phases: Phase 1 – Pre-flight. Phase 2 – Flight.

This is an open book check out. The aircraft's documentation will be required to complete the Phase 1 check out. Read the question and the possible answers, then print the letter of the most correct answer on the line next to the question.

1. _____	The maximum take-off weight of C172 N80117 in the normal category is:	**a.** 2200 pounds **b.** 2300 pounds **c.** 2250 pounds
2. _____	The empty weight of C172 N80117 is:	**a.** 1449.3 pounds **b.** 1500 pounds **c.** 1556.4 pounds
3. _____	The useable fuel capacity of N80117 is:	**a.** 45 gallons total, 40 gallons useable **b.** 40 gallons total, 39 gallons useable **c.** 42 gallons total, 38 gallons useable
4. _____	What is the total engine oil capacity and, except for an extended flight, when should oil be replenished?	**a.** 6 qts, 4 qts minimum, fill to 6 qts. **b.** 8 qts, 6 qts minimum, fill to 7 qts. **c.** 6 qts, 4 qts minimum, fill to 5 qts.
5. _____	The maximum allowable weight that can be placed in the baggage areas in normal category operations is:	**a.** 120 pounds **b.** 135 pounds **c.** 100 pounds
6. _____	The maximum allowable weight of 50 lbs is located in the baggage area 2, how much weight can you put in baggage area 1?	**a.** 100 pounds **b.** 50 pounds **c.** 70 pounds
7. _____	The maximum allowable weight that can be placed in the baggage areas in utility category operations is:	**a.** 50 pounds in area 2, 25 pounds in area 1 **b.** None, both areas must be empty. **c.** 70 pounds combined total of areas 1 and 2
8. _____	The first indication of carburetor ice in an aircraft with a normally aspirated engine in cruise flight with a fixed pitch propeller is:	**a.** A gradual decrease in RPM **b.** A sudden decrease in RPM **c.** Rough running engine and RPM loss
9. _____	The normal leaning procedure in an aircraft without an EGT is to set the engine up for cruise, lean the mixture until engine RPM peaks and begins to fall off, then:	**a.** Enrich the mixture until RPM drops 50 RPM **b.** Enrichen slightly back to peak RPM **c.** Lean the mixture another 25 RPM

10. ____ The maximum gross weight for operation in the utility category is:
- **a.** 1800 pounds
- **b.** 2000 pounds
- **c.** 2300 pounds

11. ____ What is the maximum allowable aft CG in the utility category?
- **a.** 47.3 inches aft of datum at all weights
- **b.** 40.5 inches aft of datum at all weights
- **c.** 45.3 inches aft of datum at all weights

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13. ____ The airspeed indicator in N80117 registers in:
- **a.** KPH
- **b.** MPH
- **c.** KTS

14. ____ What is the maximum demonstrated cross wind component of a C172?
- **a.** 15 MPH
- **b.** 12 KTS
- **c.** 15 KTS

15. ____ The distance to clear a 50 ft. obstacle in a maximum effort, no wind, 2300 lb. gross from a paved runway at sea level with a temperature of 15 C (59 F) and altimeter setting of 29.92" is:
- **a.** 1525 feet
- **b.** 1340 feet
- **c.** 1440 feet

16. ____ If the runway in question 15 was a dry grass strip, the take-off data would have to be adjusted by:
- **a.** Increase the total distance by 7%
- **b.** Increase both the ground run and total distances by 7% of the total to clear a 50 foot obstacle
- **c.** Increasing the ground run by 15%

17. ____ What engine setting would produce the closest performance to 75% brake horse power at 5,000 feet on a standard day?
- **a.** 2600 RPM, for 8.3 gallons/hour
- **b.** 2400 RPM, for 8.0 gallons/hour
- **c.** 2500 RPM, for 7.7 gallons/hour

18. ____ What is the recommended tire pressure for the main gear tires?
- **a.** 29 psi on 6.00 x 6 tires
- **b.** 32 psi on 6.00 x 6 tires
- **c.** 50 psi on 6.00 x 6 tires

19. ____ What is the recommended tire pressure for the nose gear tire?
- **a.** 31 psi on 5.00 x 5 tire
- **b.** 32 psi on 5.00 x 5 tire
- **c.** 50 psi on 5.00 x 5 tire

20. ____ What power setting and airspeed is recommended for a cruise climb?
- **a.** Full throttle and 70-85 MPH
- **b.** Full throttle and 70-90 KTS
- **c.** Full throttle and 60-75 KTS

21. ____ What power setting is recommended for cruise flight?
- **a.** 2150-2300 RPM, but no > than 65%
- **b.** 2200-2700 RPM, but no > than 75%
- **c.** 2450-2750 RPM, but no > than 75%

22. ____ When securing the aircraft, the fuel selector valve should be:
- **a.** Turned to the right tank to prevent siphoning
- **b.** Remain on "Both"
- **c.** Turned to the fullest tank

23. ____ What is the approved flap range for take-off?
- **a.** 0 to 10 degrees
- **b.** Flaps not recommended for take-off
- **c.** 0 to 20 degrees

24. ____ When the Ammeter is broken and not working is a C172 considered airworthy and can be flown?

a. Yes, it is not an instrument or equipment required by FAR 91.205
b. Yes, if the battery is less than one year old and fully charged
c. No, the equipment list indicates it is required for FAA certification

25. Using the Cessna manual's loading graph and center of gravity moment envelope for C172 N80117, calculate the CG for the following:

Item	Weight	Moment/1000
Empty Weight		
Useable Fuel – 40 gallons	240	
Pilot and Co-Pilot	320	
Rear Seats	212	
Baggage Area 1	70	
Baggage Area 2	Empty	
Total Weight and Moment		

26. Using the Cessna manual's loading graph and center of gravity moment envelope for C172 N80117, calculate the CG for the following:

Item	Weight	Moment/1000
Empty Weight		
Useable Fuel – 20 gallons		
Pilot and Co-Pilot	340	
Rear Seats	Empty	
Baggage Area 1	Empty	
Baggage Area 2	Empty	
Total Weight and Moment		

27. ____ Comparing the two weight and balance computations (questions 21 and 22), which configuration fits the utility category?

a. Both
b. Question 25
c. Question 26

28. ____ What is the recommended approach speed with flaps down?

a. 75 to 85 KTS
b. 75 to 80 KTS
c. 55 to 65 KTS

29. Provide the following airspeeds (IAS):

Assume: Most forward CG and Gross Weight

V_a	Design maneuvering speed	_____
V_{no}	Maximum cruise speed	_____
V_{ne}	Never exceed speed	_____
V_y	Best rate of climb speed	_____
V_x	Best angle of climb speed	_____
V_{fe}	Maximum flap extension speed	_____
V_{s1}	Power off stall, flaps up	_____
V_{so}	Power off stall, flaps down	_____

30. ____ What airspeed produces the best glide for an engine out glide from 8,000 feet and how far could you glide in a zero wind condition?

a. 100 MPH IAS, glide distance 20 SM
b. 65 KTS IAS, glide distance 12 SM
c. 85 KTS IAS, glide distance 18 SM

31. ____ What is the stalling speed in a 60 degree bank with full flaps at the most rearward CG?

a. 62 KTS IAS
b. 51 KTS IAS
c. 45 KTS CAS

32. ____ The easiest way to ground handle this aircraft is to use the tow bar. What is the tow bar turning angle limits?

a. Do not exceed 30 degrees from center
b. To the limit where it will turn no further
c. Do not exceed 60 degrees from center

33. ____ Where is the emergency locator transmitter (ELT) located?

a. In the baggage compartment, right side
b. Behind the baggage compartment
c. In the baggage compartment, near door

34. ____ How is the ELT armed in this aircraft?

a. A switch on the unit's case
b. It is always armed
c. A switch on the instrument panel, left side

35. ____ Where is the battery located?

a. Behind the baggage compartment
b. Behind the engine, on the firewall
c. Under the rear seats

36. ____ What is the voltage of the electrical system?

a. 14 volt generator, 12 volt battery
b. 28 volt alternator, 24 volt battery
c. 14 volt alternator, 12 volt battery

37. ____ Does C172 N80117 have a radio master switch?

a. No, shut off each radio individually
b. Yes, for comm radios only
c. Yes, individual switches can be left on

38. ____ What engine RPM is used for a magneto check?
- **a.** 2000 RPM
- **b.** 1700 RPM
- **c.** 2300 RPM

39. ____ When will the red “low voltage” light illuminate?
- **a.** When the alternator field current shuts off or low RPM during taxi
- **b.** When the battery is depleted
- **c.** When the electrical system is overloaded

40. ____ What is the normal engine RPM operating range at sea level?
- **a.** 2200-2500 RPM
- **b.** 2000-2600 RPM
- **c.** 1900-2300 RPM

41. ____ What minimum fuel grades (octane) are authorized for use in N80117 and how many fuel drain locations are there?
- **a.** AV 80/87 – 3 drains
- **b.** AV100LL – 3 drains
- **c.** AV 80/87 – 4 drains

42. ____ To act as pilot in command of this aircraft, you must be rechecked in the aircraft:
- **a.** Every Bi-Annual
- **b.** Every year
- **c.** If you have not flown a like aircraft in the preceding 90 days or when deemed by the Club

43. ____ Who is responsible for the aircraft documentation that must be on board the airplane before flight?
- **a.** The maintenance officer
- **b.** The pilot in command
- **c.** The safety officer

44. ____ Who is responsible for cleaning the airplane interior and windows after a flight?
- **a.** The next user
- **b.** The cleaning crew
- **c.** The pilot who just completed the flight

45. ____ Who is responsible for installing the control lock, securing the tie-downs and locking the aircraft’s doors and windows?
- **a.** The maintenance officer
- **b.** The person assigned to ramp duty
- **c.** The pilot who just completed the flight

46. ____ Who can perform any maintenance or modifications on club aircraft?
- **a.** Any Club member on the active list
- **b.** Anyone with a pilot’s license, except students
- **c.** The maintenance officer or his designee

47. ____ Who can instruct in club aircraft?
- **a.** Affiliated instructors approved by the board
- **b.** Any instructor appointed by an associate
- **c.** An instructor hired by the member

48. ____ In order to complete a check out in the C172, a club member must complete:
- **a.** A club authorized check out
- **b.** A check out from an FBO
- **c.** A check out form signed by any instructor

Phase 2: Flight

Valley Fliers
1402 Auburn Way North, #223
Auburn WA 98002

Name: _____

Certificate Number: _____

Instructor: _____ Certificate Type: _____

Ratings: _____

_____

Check Out Date: _____ Total Flight Time: _____ Last 90 Days: _____

Club check out is in two phases: Phase 1 – Pre-flight. Phase 2 – Flight.
The Phase 1 check out should be completed and discussed prior to the Phase 2 check out.

Flight Review	Instructor initials indicating satisfactory performance – refer to applicable PTS
I. Pre-Flight Inspection	
II. Check List and Pre-Start Procedures	
III. Starting Engine	
IV. Normal Departure Operations	
a. Taxing	a. _____
b. Pre Take-off Checks	b. _____
c. Normal Take-off	c. _____
d. Climb – appropriate power settings	d. _____
e. Cruise – appropriate power settings	e. _____
V. Air Work	
a. Steep Turns	a. _____
b. Flight at Minimum Controllable Airspeed	b. _____
c. Stall Recognition and Recovery	c. _____
d. Recovery from Unusual Attitudes by reference to instruments	d. _____
e. Simulated Emergency Descent	e. _____
VI. Normal Arrival Operations	
a. Descent and check list procedures	a. _____
b. Normal landings	b. _____
VII. Pattern Work	
a. Cross wind take-off and landing	a. _____
b. Short field take-off and landing	b. _____
c. Soft field take-off and landing	c. _____
d. Go arounds	d. _____
e. Zero Flap landing	e. _____
VIII. After Landing and Post-Flight Procedures	
IX. Remarks:	

Overall Completion of Transition or Original Aircraft Check Out

Phase 1 – Ground Instruction
Hours of ground instruction completed: _____

Instructors signature: _____

Certificate number: _____

Expiration date: _____

Phase 2 – Flight Review
Hours of flight instruction completed: _____

Instructors signature: _____

Certificate number: _____

Expiration date: _____

I have received training to operate a Cessna C172 aircraft and completed the ground and flight training noted above.
Pilots signature: _____ Date: _____