

(The following questions are taken from the C-172N POH)

1. Total usable fuel capacity for the aircraft with long range tanks is:
 - a. 54 gallons
 - b. 50 gallons
 - c. 62 gallons
 - d. 40 gallons

2. Total fuel capacity for aircraft with long range tanks is:
 - a. 54 gallons
 - b. 43 gallons
 - c. 21.5 gallons
 - d. 50 gallons

3. The maximum certified weight for the C-172N model in the normal category is _____ pounds.

4. The maximum combined weight capacity for baggage areas 1 and 2 is:
 - a. 100 pounds
 - b. 120 pounds
 - c. 170 pounds
 - d. None of the above

Maneuvering speeds for the C-172N in KIAS are:

2300 pounds _____

1950 pounds _____

1600 pounds _____

6. List the following speeds for the C-172N (KIAS-sea level):

V_X _____

V_{NO} _____

V_Y _____

V_{NE} _____

V_{FE} _____

V_{GLIDE} _____ (flaps up)

7. A gradual loss of RPM and eventual engine roughness may result from:
- Formation of carburetor ice
 - Loss of oil pressure
 - Low fuel
 - Magneto problems
8. If total loss of oil pressure is accompanied by a rise in oil temperature, there is a good reason to suspect:
- The oil pressure gauge is inoperative
 - The outside air temperature is too high for the power setting
 - An engine failure is imminent
 - The mixture is too lean
9. The avionics power switch must be _____ during engine start to _____.
- ON, ensure proper operation of gauges
 - ON, ensure the magnetos are operating
 - OFF, prevent electrical fire in the engine compartment
 - OFF, prevent possible damage to avionics
10. During the run-up magneto check, the RPM drop should not exceed _____ RPM on either magneto or greater than _____ RPM difference between magnetos.
- 100, 50
 - 125, 50
 - 175, 50
 - 50, 25
11. Using 10° wing flaps for takeoff in a C-172N reduces the ground roll and total distance over an obstacle by approximately _____ percent.
- 25
 - 50
 - 5
 - 10

12. When landing in a strong crosswind, use the following procedure for selecting the approach flap setting:

- a. Always use 40 degree flaps
- b. Always use 0 degree flaps
- c. Use the minimum flap setting required for the field length
- d. Use 10 degree flaps

13. The maximum demonstrated crosswind velocity for the C-172N is _____ knots.

- a. 25
- b. 10
- c. 15
- d. 12

14. During a balked landing (go around), reduce the flap setting to _____ degrees immediately after full power is applied.

- a. 0
- b. 10
- c. 20
- d. 30

15. Using the wind component chart, calculate the wind components for the following conditions:

Runway 19; reported wind 240° at 13 knots

- a. 13K headwind, 17K crosswind
- b. 8K headwind, 10K crosswind
- c. 8K tailwind, 10K crosswind
- d. 10K headwind, 9K crosswind

16. Calculate the following short field takeoff ground roll using C-172N data:

Pressure altitude: 1000 feet

Temp: 40 degrees C

Flaps: Up

Weight: 2300 pounds

Wind: 150 degrees at 12 knots

Runway: 19

- a. 702
- b. 945
- c. 864
- d. 850

17. Calculate the following cruise performance using the C-172N data:

Weight: 2300 pounds
 Pressure altitude: 6000 feet
 Temperature: 20 degrees above standard
 BHP: 64%

- a. 2500 RPM, 114 KTAS, 7.1 GPH
- b. 2450 RPM, 110 KTAS, 7.4 GPH
- c. 2400 RPM, 108 KTAS, 7.4 GPH
- d. 2400 RPM, 109 KTAS, 7.3 GPH

18. Calculate the following short field landing ground roll and over 50 foot obstacle distance using C-172N data:

Pressure altitude: Sea Level
 Temperature: 30 degrees C
 Flaps: 40 degrees
 Weight: 2300 pounds
 Wind: 010 degrees at 10 knots
 Runway: 19

- a. 570 and 1325 feet
- b. 627 and 1457 feet
- c. 513 and 1193 feet
- d. 818 and 1943 feet

19. Calculate the following C-172N weight and balance problem:

	Weight	Moment/1000
Basic Empty Weight	1479.8	58.58
Long range tanks full		
Pilot and Front Passenger	340	
Rear Passenger	150	
Baggage Area 1	30	
Baggage Area 2	0	
Ramp Weight & Moment		
Start/Taxi/Run-up (2 gallons)		
Takeoff Weight/Moment		

- a. Center of gravity TOO FAR AFT; weight within limits
- b. Aircraft within weight/CG limits in UTILITY category
- c. Aircraft is OVERWEIGHT; CG is within limits
- d. Weight and CG IN LIMITS, NORMAL category

(Questions 20 thru 25 are taken from T-41A data)

20. The maximum certificated takeoff weight for the T-41A is _____ pounds.
21. The flap extension speed (V_{FE}) for the T-41A is _____ MPH.
22. Total usable fuel for the T-41A is _____ gallons (standard tanks):
- 40
 - 36
 - 39
 - 53
23. The T-41A oil capacity is _____ quarts and the engine should not be operated with less than _____ quarts.
- 7/5
 - 8/5
 - 8/6
 - 6/4
24. The correct fuel management procedure for a VFR flight with a climb to cruising altitude of 5500 feet in the T-41A is:
- Fuel selector on BOTH at all times
 - Fuel selector on BOTH for takeoff and climb
 - Fuel selector set to LEFT or RIGHT during cruise
 - Both b and c above are correct
25. List the following speeds for the T-41 A (MPH-sea level)
- | | |
|------------------------|------------------------------|
| V_X _____ | V_{NO} _____ |
| V_Y _____ | V_{NE} _____ |
| V_A (2300 lbs) _____ | V_{GLIDE} (flaps up) _____ |