

**WINGS OF CAROLINA FLYING CLUB  
PILOT CHECK-OUT QUIZ - MOONEY 201**

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Pilot \_\_\_\_\_

Score \_\_\_\_\_

Instructor \_\_\_\_\_

Date \_\_\_\_\_

**Instructor:** Please note the final score (subtract 2.4 points from 100 for each wrong answer) on the checkout form and file the quiz in the Pilot Records folder.

**Pilot:** All questions may be answered by reference to published materials. Circle the letter by the correct answer.

1. The FAA designator for the Mooney 201 is

- a) M-20
- b) M20J
- c) M-201
- d) M20-K

2. The engine in the Mooney 201 is a

- a) Continental IO-360
- b) Lycoming O-360
- c) Lycoming IO-360
- d) Continental O-200

3. The maximum rated horsepower of the engine is

- a) 180
- b) 200
- c) 201
- d) 360

4. The grade of fuel required for the engine is

- a) Aviation 80 (pink)
- b) Aviation 100LL (light blue)            or Aviation 100 (green)
- c) Aviation 100LL (light blue)            or Automotive no-lead (clear)
- d) Aviation 100LL (light blue)            or Aviation 115 (purple)

5. The maximum usable fuel capacity and "to the tabs" fuel capacity is

- a) 50 gallons (300 pounds) and 42 gallons (252 pounds)
- b) 396 pounds (66 gallons) and 300 pounds (50 gallons)
- c) 384 pounds (64 gallons) and 300 pounds (50 gallons)
- d) 52 gallons (312 pounds) and 50 gallons (300 pounds)

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6. On the 1981 and subsequent models

- a) there are no tabs in the tanks
- b) there are fuel gauges on the top of the wings to facilitate partial fueling
- c) fuel capacity is larger than pre-1981 Mooney 201s
- d) rubber bladders are used for fuel tanks

7. The maximum certificated gross weight of the 201 is

- a) 2,350 lbs
- b) 2,650 lbs
- c) 2,750 lbs
- d) 2,740 lbs

8. The approximate payload of the (heaviest) WCFC 201 (not including full fuel, which is presumed to have been loaded) is

- a) 505 lbs (3 adults, no bags)
- b) 550 lbs (3 adults, 40 lbs bags)
- c) 595 lbs (3 adults, 85 lbs bags)
- d) 695 lbs (4 adults, 15 lbs bags)

Write in Empty Weights of Club Mooneys:

N \_\_\_\_\_ lbs  
N \_\_\_\_\_ lbs  
N \_\_\_\_\_ lbs

9. Given the following data, are weight and balance limits met? (Use heaviest Mooney)

Pilot - 190 lbs	Front Seat Passenger - 170 lbs
Rear Passenger - 135 lbs	Rear Passenger - 120 lbs
Baggage - 50 lbs	Hat Rack - 10 lbs
Fuel - 50 gallons (to tabs)	

- a) Yes, but near gross weight and near the aft limit
- b) No, slightly over gross weight and aft of the aft CG limit
- c) Yes, but near gross weight, and near the forward limit
- d) No, well over gross weight but forward of the aft CG limit (50.1 inches)

Correctly identify the following speeds at gross weight (KIAS)

- |                    |                                |
|--------------------|--------------------------------|
| 10. $V_a$ _____    | 14. $V_{lo}(\text{Ret})$ _____ |
| 11. $V_{so}$ _____ | 15. $V_y$ _____                |
| 12. $V_{fe}$ _____ | 16. $V_x$ _____                |
| 13. $V_{le}$ _____ | 17. Best Glide: _____          |

18. The Gear Safety Override Switch

- a) Allows the landing gear to be retracted at speeds less than 65 KIAS (75 mph) or may be used to override a failed deactivation of the airspeed safety switch
- b) Overrides the "squat switch" on the left main gear
- c) [Both a) and d) are correct.]
- d) Overrides the safety features of the airspeed switch and can cause the gear to start retracting while on the ground

19. The "Aux Bus" circuit breaker powers

- a) the auxiliary bus located on the lower right panel
- b) all of the white switch/breakers on the lower panel
- c) the bottom row of circuit breakers on the left breaker panel
- d) the auxiliary power to the standby vacuum pump

20. How is the voltage regulator "re-set" after a high voltage indication?

- a) by closing the field winding circuit breaker
- b) by pushing the "ALT" circuit breaker
- c) by first switching off the radio master, then turning off, and then on, the master switch
- d) by pulling the "ALT" breaker

21. What is the function of the DIM switch - to the right of the annunciator panel?

- a) Dims the low fuel lights only
- b) Dims all annunciator lights for night operation
- c) Is used for testing the dim function only
- d) Does not work in the Mooney installation

22. Where is the static system drain located?

- a) On the sidewall of the cabin near the pilot's left knee
- b) On the forward bottom skin of the left wing just outboard of the fillet
- c) Under the panel below the altimeter and vertical speed indicator
- d) On the bottom of the fuselage tail cone near the battery box vent inlet

23. If the "VAC" illuminates steadily in the annunciator panel, it indicates

- a) that voltage (AC) is high
- b) that suction is above 5.5 inches of mercury
- c) that voltage (AC) is low
- d) that suction is below 3.5 inches of mercury

24. Following an engine fire and shutdown, according to published procedures

- a) the engine may be restarted by using the engine restart checklist
- b) the engine may be restarted only if the pilot determines that a fire hazard no longer exists
- c) the engine rotation should be stopped by slowing down
- d) do not attempt an engine restart

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25. What is the minimum approximate altitude loss in a one turn spin in the 201?
- a) 500 feet
  - b) 1,000 feet
  - c) 1,500 feet
  - d) 2,000 feet
26. After manually extending the gear, the emergency (red) gear lever must be latched before normal operation.
- a) True
  - b) False
27. During an engine-out glide, the propeller control should be
- a) pushed full in
  - b) left alone
  - c) pulled full out
  - d) cycled to keep oil in the prop dome
28. Certain RPM (1500 - 1900) must be avoided
- a) to keep from "laboring" the engine
  - b) to avoid detonation
  - c) to keep from running "over square"
  - d) to avoid "de-tuning" the crankshaft flyweights
29. Pilots should be especially aware to supervise any ground towing
- a) to avoid exceeding the nose gear steering limits
  - b) to be sure that the wing tips will clear other objects
  - c) to be sure that the proper tow bar is hooked to the tug
  - d) to be sure that the brakes are properly released
30. Fuel burn for the 201 at about 70% power is approximately
- a) 14.2 gph
  - b) 12.4 gph
  - c) 10.1 gph
  - d) 8.0 gph
31. When "load shedding" during an electrical (alternator) failure, which of the following would be the greatest electrical current users to shut off (in order)? (Think in terms of steady power users, not intermittent loads.)
- a) Nav 1 (KNS-80), Landing Light, Com 2, Position Lights, Landing Gear Actuator
  - b) Com 1, Position Lights, Landing Light, Nav 2, Transponder, Gear Warning
  - c) Landing Light, Nav Lights, Com 2, Nav 2, ADF, Transponder, Auto Pilot
  - d) Landing Light, Nav Lights, Transponder and Nav 1 (KNS-80), Auto Pilot, and any other radios or electrical equipment not absolutely necessary.

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32. If the radio master switch fails in the "off" position

- a) The radios will not be able to be switched on
- b) The radios will remain on and function normally if the master is ON
- c) The radios may be switched on by turning the master switch OFF
- d) The "AUX BUS" circuit breaker should be pulled to restore radio power

**NOTE:** The following questions concern published WCFC policy and standard procedure as found in Club published materials.

33. The minimum length runway for takeoff in the 201 permitted by WCFC policy is:

- a) 3,000 feet at S.L. for normal takeoff procedures
- b) 3,500 feet at 1,000 MSL for normal takeoff procedures
- c) 5,000 feet at 6,000 MSL for normal takeoff procedures
- d) a) & b) are correct

34. IAS on approach should be

- a) 90 KIAS on final and 71 KIAS over the threshold
- b) 80 KIAS on final and 71 KIAS over the threshold
- c) 90 KIAS on final and over the threshold
- d) 80 KIAS over the threshold

35. WCFC procedure regarding checklist use

- a) suggests that all normal checklists be memorized when possible
- b) states that checklists be read aloud utilizing the "challenge/response" method
- c) requires that the checklist be accomplished after the cockpit or desired configuration has been set up so as to verify actions
- d) is unclear

36. Power reductions in descent should be accomplished

- a) about 1" at a time, enriching mixture, cowl flaps closed
- b) about 8" at a time, enriching mixture, cowl flaps open
- c) smoothly as necessary, mixture lean, cowl flaps open
- d) about 3" at a time, mixture lean, cowl flaps closed

37. WCFC policy permits leaning the M20J

- a) at a climb power of 80%
- b) to peak or lean of peak if power below 60% and engine smooth
- c) b) and d) are correct
- d) at climb power of 75% to rich of peak

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38. The Pilot-In-Command is responsible for seeing that the passengers are briefed before each takeoff on the use of seat belts and emergency egress procedures.
- a) true, and a similar briefing is required before landing
  - b) false, this is not a specific requirement, although it would be a good operating practice
  - c) true, the FARs require such a briefing and also specify that the passengers should be instructed to fasten their seat belts before landing
  - d) false, this is only a requirement for large aircraft
39. Why is it a good practice to start and taxi on one tank and switch to the other before run-up and takeoff?
- a) to be sure that the fuel valve is operational
  - b) to be sure that the pilot knows where the valve is
  - c) to increase the chances that any contaminants will be discovered before the tanks are switched enroute
  - d) both a) and c) are correct
40. What is the current refueling policy on the club Mooneys when returning to KTTA?
- a) Always completely fill the tanks.
  - b) Always fill to the tabs, unless the next pilot makes a specific request.
  - c) Leave minimum fuel in the aircraft to allow the next pilot maximum flexibility.
  - d) Check with the Club manager before refueling.
41. Why should cranking be kept to a minimum when hot starting the 201?
- a) Because the engine will quickly start and "overrun" the starter.
  - b) Because the battery may be quickly worn down.
  - c) Because the starter is already "heat soaked" and excessive cranking will melt down the armature windings and ruin the starter.
  - d) Because the engine starts best with short bursts of cranking.
42. What is the correct procedure for hot starting the 201?
- a) Turn the boost pump on, prime briefly with the mixture, and crank.
  - b) Leave the boost pump off, the mixture "cut off", throttle at 1/2 inch, and crank for a maximum of 12 seconds (count or use clock).
  - c) b) and d) are correct.
  - d) If the engine won't start using b), then pressurize the system, prime for 3 seconds at 1/2 inch throttle, and use "flooded start" technique (boost pump off, throttle full open, mixture "cut off", slowly but firmly open mixture and bring throttle to 1,000 rpm when engine fires).

**NOTE: A Differences Quiz is required to be completed for each Club Mooney flown as appropriate.**