MAFC **C-172** Aircraft Check-Out, Rev. A

Pilot's Name _____

Medical Class _____ Medical Date _____

Certificate number _____ Class _____

Ratings _____

Flying time: total _____ last 90 days _____

Aircraft: Cessna 172M, Skyhawk - 1976

Note: This is an open-book quiz. All pilots must have their own "Pilot's Operating Manual" covering the specific aircraft being checked out in. Some questions will require other sources of information that the pilot will have to reference, or be knowledgeable in. For answers requiring numbers, please use the units corresponding to the units used on the specific aircraft's flight instrument unless otherwise indicated.

1) Multiple choice (choose the best answer): Who is responsible for making sure each MAFC pilot is safe?
   (a) The FAA.
   (b) The MAFC Board of Trustees.
   (c) The flight instructor(s).
   (d) Each pilot individually.
   (e) None of the above.
2) Tire inflation: mains: _____ psi and nose: _____ psi.
3) How do you tell if the nose strut is properly inflated?

   _____
4) Engine make: _____ Model: _____
5) Rated (sea-level) power: _____ hp at _____ rpm.
6) Typical climb power setting: _____ rpm.
7) Usable fuel grades include _____ octane (_____ color).
   and _____ octane (_____ color)
8) Fuel: full: _____ gal each tank, of which _____ gal are usable.
9) Oil capacity: _____ quarts; theoretical minimum: _____ quarts.
   Normally we add 1 quart when the level gets to: _____ quarts.
10) Max gross weight: _____ lbs; wingspan _____ ft.
11) Compare this to a C-152 (1670 lbs, 33.33 ft). How is this difference reflected in flying qualities and pilot technique?

    _____
12) Useful load for this specific airplane: _____ lbs;
13) Max load in the baggage compartment: _____ lbs.
14) Stalling speed and max allowable speed versus flap setting:
    (assuming gear down, max weight, unaccelerated flight)
    no flaps: zero deg; stall: _____ Kias; max: _____ Kias.
    1/3 flaps: _____ deg; stall: _____ Kias; max: _____ Kias.
    2/3 flaps: _____ deg; stall: _____ Kias; max: _____ Kias.
    full flaps: _____ deg; stall: _____ Kias; max: _____ Kias.

Note: in the following group, each question requires two answers. The answer in the left column applies when the airplane is at the max allowable weight. The answer in the right column applies when the airplane is "Lightly Loaded," (two pilots, flight cases) which is not explicitly covered in the POH.

Specify below your specific choices used to determine the "lightly loaded" aircraft.

_____

		At max weight	Lightly Loaded
15) Vy	Best Rate of Climb:	_____ Kias	_____ Kias
16) Vx	Best Angle of Climb:	_____ Kias	_____ Kias
17)	Cruise climb:	_____ Kias	_____ Kias
18) Va	Manuevering Speed:	_____ Kias	_____ Kias
19)	Final approach (flaps):	_____ Kias	_____ Kias
20)	Final appr. (no flaps):	_____ Kias	_____ Kias
21) Vfe	Max Flaps Extended:	_____ Kias	_____ Kias
22) Vne	Never Exceed:	_____ Kias	_____ Kias
23) Vno	Max structural cruise:	_____ Kias	_____ Kias
24)	Stall (clean):	_____ Kias	_____ Kias
25) Vs0	Stall (landing config):	_____ Kias	_____ Kias
26)	Best-angle glide:	_____ Kias	_____ Kias

27) Max demonstrated crosswind component: _____ knots.

28) What are the steps for proper use of the EGT for leaning?

_____

29) The highest altitude at which 75% power can be achieved at 2400 RPM is _____ ft.

30) Cruising at 75% power at 5000 feet should produce _____ Kias and consume _____ gph.

31) The electrical system uses a _____ volt battery which charges at _____ volts.

32) The alternator is rated at _____ amps and the battery is rated at _____ amp-hours.

33) The Pitot heat should be used in the following conditions:

_____

34) What is the after-takeoff checklist?

_____

35) Procedure to activate the "nearest airport" feature of the Garmin GPS: _____

36) Emergency airspeeds:

a) Best-angle glide: _____ Kias

b) Expeditious descent: _____ Kias using _____ configuration.

c) Emergency landing (short final): _____ Kias

37) The most common cause of engine failure is: _____

38) Cabin air is turned off by: _____

39) In case of engine failure during flight: _____

_____

40) Procedure for power-off landing: _____

_____

41) In case of engine fire in flight: _____

_____

42) In case of electrical fire in flight: _____

_____

43) In case of alternator failure:

_____

44) In case of unlatched door in flight:

_____

45) Procedure for spin recovery:

_____

46) The power-off glide ratio (assuming optimal technique and zero wind) is _____ to 1, which will take you to a point _____ degrees below the horizon.

47) List below your personal minimums for flight and discuss them with your instructor. These minimums should include the items below but may also include additional parameters for flight.

Ceiling & Visibility _____, _____
Surface Winds & Crosswind _____, _____
Winds Aloft & Temperature _____, _____
Current Weather & Forecast _____

48) How have these personal minimums changed as you log more flight time?

_____

_____

Cross Country Planning

The remaining questions are based on the following takeoff scenario: Pilot: 200 lbs.; Copilot: 200 lbs.; Passenger #1: 170 lbs.; Passenger #2: 170 lbs.; Baggage: 50 lbs. Wind: Calm. Temperature: 80 F. Altimeter setting: 29.92. Departing from: Spring Hill Airport (70N) / Sterling PA. Cruise Altitude: 6500ft; Cruise Power: 65%; Mission requirement: maximum range - VFR.

48) Optimum amount of fuel on board: _____ gal.

49) Takeoff flap setting: _____ degrees.

50) Expected takeoff ground roll: _____ feet, at which point you should have an airspeed of at least _____ Kias.

51) Procedure in case you have not achieved that speed by that point:

_____

52) Approximate margin for error in that case: _____ feet of runway length, which corresponds to _____ seconds of reaction time.

53) In the case where you do get proper takeoff performance, the distance required to clear a 50-foot obstacle is: _____ feet.
54) Maximum distance of flight assuming a wind of 0 kts. _____
55) Maximum distance of flight assuming a headwind of 30kts. _____

Practical and Oral Examination

____Knowledge Of Pilot's Handbook
____Knowledge Of Operating Limitations
____Knowledge Of Fuel, Electrical, And Hydraulic Systems
____Knowledge Of Weight And Balance Computations
____Knowledge Of Emergency Procedures
____Knowledge Of Radio Procedures And Phraseology
____Knowledge Of Radio Equipment
____Knowledge Of Federal Aviation Regulation Part 91
____Knowledge Of Local Flying Regulations
____Knowledge Of Weather Facilities & Weather Reports
____Practice Area & Airports To Be Used

Checked Out For:

Local Flights _____
Cross Country Flight _____
Night Flight _____
IFR Flight Other _____

Check-Out completed by:

Instructor _____
Date _____