# Waterloo Air Rental Club Cessna 172M Open Book Exam

**Member Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Member Number (Flight Schedule Pro):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Part 1: Limitations**

1. List the following airspeeds:
   1. Never exceed speed (Vne)
   2. Maximum structural cruise speed (Vno)
   3. Maneuvering speed (Va)
   4. Flap extension speed (Vfe)
   5. Stall speed cruise (Vs)
   6. Stall speed in landing configuration (Vso)
   7. Best glide speed (Vglide)
   8. Rotation speed (Vr)
   9. Best angle of climb (Vx)
   10. Best rate of climb (Vy)
2. List the following weights:
   1. Basic empty weight
   2. Maximum takeoff weight
   3. Useful load
   4. Maximum baggage weight in both areas
   5. Maximum fuel weight
3. What is the appropriate fuel grade and colour?
4. What is the minimum and maximum oil quantity for this aircraft and what type do we use?
5. Electrical System
   1. What is the Battery Voltage?
   2. How does the alternator operate?
6. What is the Maximum demonstrated x‐wind component for this aircraft?
7. At what temperature do the winter baffles have to go on the C172 in the winter time?
8. To install or remove the winter baffles, what sort of training do you need? Who can perform this training?

**Part 2: Practical Application**

1. With the winds at your 7 o`clock position, what would your control inputs be during taxi?
2. During the pre‐flight inspection
   1. Location & number of fuel drains
   2. Purpose of checking fuel
   3. Tightness of oil dipstick
   4. Tire pressure
3. Mixture Control: How is the mixture regulated by the pilot to achieve the best fuel to air ratio?
4. When signing out an aircraft for a flight to Ottawa and back you notice that the aircraft is scheduled for its 50 hour inspection the next day and has already been signed off for the additional 10 hours. The journey log shows that you have 1.5 hours remaining from the extended number. Can you take the aircraft flying? Should you fly your intended route?

# Flight Review

This section should be filled out by check out pilot

|  |  |
| --- | --- |
| **Item** | **S/U** |
| 1. Use of Checklists |  |
| 1. Pattern Awareness / Preflight / Ground Handling |  |
| 1. Crosswind Takeoff and Landing Total ( ) |  |
| 1. Short Field Takeoff and Landing |  |
| 1. Soft Field Takeoff and Landing |  |
| 1. Go-Around |  |
| 1. Simulated Engine Failure   PATTERN ( ) AT ALTITUDE ( ) LOW ALTITUDE ( ) |  |
| 1. Ground Reference Maneuvers   RECT CRS ( ) S-TURNS ( ) TURN AROUND PT ( ) |  |
| 1. Steep Turns |  |
| 1. Approach Stall and Recovery |  |
| 1. Departure Stall and Recovery |  |
| 1. Maneuvering During Slow Flight |  |
| 1. Unusual Attitude Recovery |  |
| 1. Radio Communication |  |
| 1. Navigation (VOR / ADF Tracking and Lost Procedures) |  |

# Check on Type Checklist

1. Tour of Flite Line facilities. Shown fuel disposal and oil addition.

Date & Signature

1. Check on type exam written, passed and corrected.

Date & Signature

1. Membership completed and shown online booking system.

Date & Signature

1. Explanation and competency check on aircraft documentation and sign out & in procedures.

Date & Signature

1. Check flight(s) with instructor completed and up to flight test standards.

Date & Signature