PACIFIC FLYING CLUB

Piper Seneca I (PA34-200) Aircraft Operating Manual Exam

Member Name _____ **Date** _____

Corrected to 100% - Instructors Name_____**Signature**_____

Performance

1) What are the critical speeds for the following conditions?

a) Stall Speed Landing Configuration (VSO at 4,000LBS) _____MPH
b) Stall Speed Clean Configuration (VS at 4,200LBS) _____MPH
c) Rotation Speed (VR) _____MPH
d) Minimum Controllable Airspeed (VMC) _____MPH
e) Best Angle of climb (VX) _____MPH
f) Best Rate of climb (VY) _____MPH

g) Best Single Engine Rate of Climb (VYSE) _____MPH
h) Never Exceed Speed (VNE) _____MPH
i) Maximum Structural Cruise (VNO) _____MPH
j) Maximum Gear Extended Speed (VLE) _____MPH

k) Maximum Gear Extension Speed (VLO down) _____MPH
Maximum Gear Retraction Speed (VLO up) _____MPH
l) Maximum Flap Extension Speed (VFE) _____MPH
Design Flap Speed 10° (VF) _____MPH
Design Flap Speed 25° (VF) _____MPH
Design Flap Speed 40° (VF) _____MPH
m) Minimum Flap Retraction Speed _____MPH
n) Maneuvering Speed @ 2743 lbs (VA) _____MPH
o) Maneuvering Speed @ 4200 lbs (VA) _____MPH

2) The maximum demonstrated crosswind component is _____KTS.

3) What is meant by the term one engine inoperative service ceiling? _____
_____

The service ceiling for this aircraft is _____feet (4,200LBS)
The single-engine service ceiling for this aircraft is _____ feet (4,200LBS)

4) The fuel consumption at 65% power is _____GPH

5) The maximum rated horsepower is _____HP at _____RPM

6) What is the take off distance over a 50' obstacle under the following conditions? _____Feet

Temperature: 50° F
Altitude: 3000'
Weight: 3600 lbs
Wind: 15 MH headwind

7) What is the single engine climb performance under the following conditions?

Pressure Altitude: 4000'
Temperature: 85°F
Weight: 4200 lbs

Weight and balance

1) List the following weights:

Maximum take-off weight _____lbs
Maximum landing weight _____lbs
Maximum zero fuel weight _____lbs

2) The forward baggage compartment is located _____and its maximum weight is _____. The aft baggage compartment is located _____ and its maximum weight is _____.

3) Maximum positive load factor is _____G.

4) Complete a weight and balance for the following:
   2 males
   2 females
   65 US Gal fuel
   150 lbs baggage
   Determine the gross weight, centre of gravity and zero fuel weight.

Fuel System

1) The recommended fuel grade is _____.

2) The total fuel capacity is_____US Gal.
The total useable fuel is _____US Gal.

3) Explain the procedure for drawing fuel from the tank on the side opposite to the operating engine_____
_____

Propeller System

1) When is it not possible to feather the props? _____
_____

2) When checking the feathering system during the run up, what indicates that the system is functioning normally?
_____

3) The maximum RPM allowed when exercising the propeller during the run-up is _____RPM

Landing Gear System

1) How is hydraulic pressure supplied to the landing gear system?
_____

2) Why is it not advisable to move the gear selector to the opposite direction while the gear is in transit?
_____

3) How is inadvertent gear retraction prevented while the aircraft is on the ground?
_____

4) What is the procedure for manually extending the gear?
_____

Electrical System

1) What indication would alert the pilot that the over voltage relay has tripped? _____
   _____

2) What is the maximum continuous output from the alternators?
   _____

3) What is the procedure to be followed if both over voltage lights illuminate? _____
   _____

Pitot Static System

1) Where are the static and pitot system drain valves located?
   _____

Procedures

1) When is asymmetrical power to be used while taxiing?
   _____

2) When should the landing gear be retracted after take-off?
   _____

3) The flap setting for a normal take-off is_____

4) Why should you wait until 500' AGL before setting climb power?
   _____

5) The recommended speed for approach and landing is _____KIAS
   The recommended flap setting is _____.

6) What is the proper procedure for a go-around? _____
   _____

Emergencies

1) When do you use the alternate air source? _____

2) What are the suggested procedures to attempt to restore power prior to feathering a propeller? _____
_____

3) If an engine failure occurs on take-off below _____the take-off must be aborted. What would happen if you were to continue with the take-off below speed? _____
_____

4) Explain procedure to follow in the event of the following emergencies:

Engine fire in flight _____
_____
Electrical fire in flight _____
_____
Propeller over speed _____
_____

Vmc- Minimum Controllable Airspeed

1) The minimum altitude that Vmc shall be demonstrated is _____ft AGL.

2) What is the recovery procedure for Vmc? _____
_____

3) How does Vmc vary with the following?

Maximum Gross Weight _____
High Altitude _____
Aft C of G _____
Flaps Extended _____
Landing Gear Extended _____