

CESSNA 182 TEST

1. The minimum turn radius is?
 - a. 27 feet
 - b. 32 feet
 - c. 36 feet

2. The engine is a Continental O-470-U and rated at what horsepower?
 - a. 230 hp @ 2400 RPM
 - b. 300 hp @ 2850 RPM (max of 5 minutes)
 - c. 285 hp @ 2700 RPM

3. Recommended fuel grade is 100 LL and the color is?
 - a. Green
 - b. Blue
 - c. Red

4. (True/False) - Alternate fuel grade is 100 and Red in color.

5. The fuel capacity is?
 - a. 61 total and 56 usable
 - b. 92 total and 88 usable
 - c. 54 total and 50 usable

6. (True/False) - The grade of oil for summer and winter is 40 weight.

7. (True/False) - The maximum certificated weight for takeoff is 3100 lbs.

8. (True/False) - The maximum certificated landing weight is 2900 lbs.

9. During takeoff, the maximum allowable RPM developed by the engine is _____ RPM.
 - a. 2200 - 2550
 - b. 2700 - 2850
 - c. 2400

10. Max oil temp is?
- Anywhere in the green arc
 - 240 degrees
 - Not specified
11. The normal oil pressure range is?
- 25 to 110 PSI
 - 50 to 100 PSI
 - 30 to 60 PSI
12. The normal RPM range is?
- 2000 to 2650
 - 2100 to 2400
 - 2700 to 2850
13. (True/False) - The maximum G's for flap up configuration are +3.8 to -1.52.
14. The glide ratio for a C-182 is approximately 9:1. This means that, at best glide speed, for every 1000 feet of altitude lost, the distance traveled over the ground is? (assume proper configuration, no wind)
- 1 NM
 - 1.5 NM
 - 2 NM
15. Best glide is based on?
- Windmilling propeller, flaps up, zero wind
 - Stopped propeller, flaps up, zero wind
 - Neither a or b
16. (True/False) - If a total loss of oil pressure is accompanied by a rise in oil temperature, there is good reason to suspect that an engine failure is imminent.
17. The over voltage limit is?
- 24 Volts
 - 12 Volts
 - 31.5 Volts

- 18. The max demonstrated takeoff cross wind limit is?
 - a. 20 KIAS
 - b. 12 KIAS
 - c. 15 KIAS

- 19. The minimum operating oil level is 9 quarts. What is the maximum sump oil level?
 - a. 9 quarts
 - b. 12 quarts
 - c. 14 quarts

- 20. The initial procedures for a "Go-Around" are:
 - a. Flaps to 20 degrees, full throttle
 - b. Full throttle, flaps to 20 degrees
 - c. Either a or b

- 21. To clear an obstacle with wing flaps 20 degrees, what obstacle clearance speed should be used?
 - a. 66 KIAS
 - b. 70 KIAS
 - c. 59 KIAS

- 22. The Mag check is accomplished at 1700 RPM. What is the max drop per mag and the max difference between mags?
 - a. 150 RPM max drop; +/- 50 RPM difference between mags
 - b. 125 RPM max drop; +/- 50 RPM difference between mags
 - c. 150 RPM max drop; +/- 25 RPM difference between mags

- 23. (True/False) - Full slips with full flaps are not authorized.

- 24. For cold weather starting?
 - a. No oil temp need be apparent prior to takeoff
 - b. The engine should be ready for takeoff (after a 2-5 min warm-up at 1000 RPM) if it accelerates smoothly and oil press is normal and steady
 - c. Both a and b

- 25. The maximum combined weight for baggage areas A and B is?
 - a. 150 pounds
 - b. 200 pounds
 - c. Not defined

- 26. Nose gear steering, using the rudder pedals only, will turn the nose wheel?
 - a. 5 degrees either side of center
 - b. 30 degrees either side of center
 - c. 11 degrees either side of center

- 27. The alternator is rated at?
 - a. 50 AMPS
 - b. 60 AMPS
 - c. 12 AMPS

- 28. (True/False) - The stall warning system can be checked by actuating the stall warning vane with the Master Switch on.

- 29. (True/False) You are planning a flight to HOMER and on the way; you will drop off one passenger (200 lbs.) at Kenai. You can complete this flight, as stated, to HOMER and be within the W&B limits?

Fuel in tanks	53 Gals (Departing EDF)
Pilot and Front Passenger	430 lbs
Rear Passengers	400 lbs
Baggage Area A	100 lbs

	Weight	Moment
Licensed Empty Weight	1848.02	68.921
Standard Tanks 88 Gals Max		
Pilot and Front Passenger		
Rear Passengers		
Baggage Area A * (120 lbs max)		
Baggage Area B * ** (80 lbs max)		
Baggage Area C * ** (80 lbs max)		
Total		
Max Takeoff Wt. 3100 Lbs.		

* Max combined weight for baggage area A, B, and C is 200 lbs
 ** Max combined weight for baggage area B and C is 80 lbs

(For answers 30 & 31) Compute the takeoff distance at maximum gross weight with the following conditions:

Sea level
Grass surface
0 degrees C.
50' obstacle
Tailwind – 5 kts

30. What is the ground Roll?

- a. 972 feet
- b. 1035 feet
- c. 1117 feet

31. To clear 50' obstacle?

- a. 1650 feet
- b. 1962 feet
- c. 2208 feet

(For answers 32, 33 & 34) What are the time, fuel, and distance to climb from a P.A of 2000 to a P.A. of 8000 feet? (Maximum rate of climb)

32. Time?

- a. 10 minutes
- b. 11 minutes
- c. 12 minutes

33. Fuel?

- a. 6.4 gal
- b. 4.4 gal
- c. 3.1 gal

34. Distance?

- a. 15 nm
- b. 21 nm
- c. 17 nm

(For answers 35, 36, 37, 38 and 39) What is the power setting, fuel consumption, true airspeed, range, and endurance for the following conditions?

65% Power, 6,000' PA, 88gals usable fuel, full fuel with 45 minute reserve, Standard Temperature.

35. RPM/MP?

- a. 2500/23"
- b. 2400/23"
- c. 2200/21"

36. GPH?

- a. 12.9
- b. 11.1
- c. 14.0

37. TAS?

- a. 131
- b. 139
- c. 138

38. Range nm?

- a. 518
- b. 898
- c. 725

39. Endurance hrs?

- a. 3.8
- b. 5.9
- c. 6.9

40. Compute the landing distance (ground roll) for the following conditions.

PA 1000'; 10 degrees C.; Headwind - 5 kts

- a. 570 feet
- b. 650 feet
- c. 825 feet

USAF AERO CLUB KNOWLEDGE EXAM RECORD

Name: _____

Date Taken: _____

Type Exam: Standardization Instrument Make & Model C-182 Recurrency
 Initial Solo Solo Cross Country Other: _____

Raw Score (%): _____

Date Corrected to 100%: _____

I certify all items were thoroughly debriefed and all questions answered

Pilot's Signature					Instructor's Signature						
	T	F				T	F				
1.	(A)	(B)	(C)	(D)		26.	(A)	(B)	(C)	(D)	
2.	(A)	(B)	(C)	(D)		27.	(A)	(B)	(C)	(D)	
3.	(A)	(B)	(C)	(D)		28.	(A)	(B)	(C)	(D)	
4.	(A)	(B)	(C)	(D)		29.	(A)	(B)	(C)	(D)	
5.	(A)	(B)	(C)	(D)		30.	(A)	(B)	(C)	(D)	
6.	(A)	(B)	(C)	(D)		31.	(A)	(B)	(C)	(D)	
7.	(A)	(B)	(C)	(D)		32.	(A)	(B)	(C)	(D)	
8.	(A)	(B)	(C)	(D)		33.	(A)	(B)	(C)	(D)	
9.	(A)	(B)	(C)	(D)		34.	(A)	(B)	(C)	(D)	
10.	(A)	(B)	(C)	(D)		35.	(A)	(B)	(C)	(D)	
11.	(A)	(B)	(C)	(D)		36.	(A)	(B)	(C)	(D)	
12.	(A)	(B)	(C)	(D)		37.	(A)	(B)	(C)	(D)	
13.	(A)	(B)	(C)	(D)		38.	(A)	(B)	(C)	(D)	
14.	(A)	(B)	(C)	(D)		39.	(A)	(B)	(C)	(D)	
15.	(A)	(B)	(C)	(D)		40.	(A)	(B)	(C)	(D)	
16.	(A)	(B)	(C)	(D)		41.	(A)	(B)	(C)	(D)	
17.	(A)	(B)	(C)	(D)		42.	(A)	(B)	(C)	(D)	
18.	(A)	(B)	(C)	(D)		43.	(A)	(B)	(C)	(D)	
19.	(A)	(B)	(C)	(D)		44.	(A)	(B)	(C)	(D)	
20.	(A)	(B)	(C)	(D)		45.	(A)	(B)	(C)	(D)	
21.	(A)	(B)	(C)	(D)		46.	(A)	(B)	(C)	(D)	
22.	(A)	(B)	(C)	(D)		47.	(A)	(B)	(C)	(D)	
23.	(A)	(B)	(C)	(D)		48.	(A)	(B)	(C)	(D)	
24.	(A)	(B)	(C)	(D)		49.	(A)	(B)	(C)	(D)	
25.	(A)	(B)	(C)	(D)		50.	(A)	(B)	(C)	(D)	

CLOSED BOOK EXAM

Write the Emergency Action Procedures for the following:

Engine Fire During Start

1. _____
2. _____
3. _____
4. _____
5. _____

Engine Fire In Flight

1. _____
2. _____
3. _____
4. _____
5. _____

Engine Failure In Flight (Cruise)

1. _____
2. _____
3. _____
4. _____
5. _____

Emergency Approach and Landing

1. _____
2. _____
3. _____
4. _____
5. _____

Fill in all the applicable blanks.

1. V_A _____ Lbs
2. V_A _____ Lbs
3. V_A _____ Lbs
4. V_{FE} _____ (First Extension Increment)
5. V_{LO} _____ Retraction (Retractable Gear Aircraft Only)
6. V_{LO} _____ Extension (Retractable Gear Aircraft Only)
7. Best Glide Speed @ Maximum Gross Weight _____