

# MOUNTAIN FLYING TEST

## USE ANSWER SHEET (AF FORM 1584C, *EXAM RECORD*)

1. It is best to plan an early morning flight to take advantage of the air, which is:
  - a. hotter and smoother.
  - b. cooler and smoother.
  - c. no wind or fog.
  
2. You are getting ready to taxi on thick gravel. You push it out of the tire "divots" during preflight, but it will not move as you apply power to taxi. You should:
  - a. Apply full power until the aircraft starts to move.
  - b. Pump the yoke fore and aft while adding power to assist in moving.
  - c. Have your passengers push the aircraft while you apply power and once you are moving, have them get in the aircraft.
  
3. What effect does a high density altitude have on takeoff, landing and climb performance?
  - a. Increase takeoff distance, increase landing roll, decrease climb performance
  - b. Increase takeoff distance, decrease landing roll, decrease climb performance
  - c. Increase takeoff distance, increase landing roll, increase climb performance
  
4. Which statement is false regarding departing a mountain airport?
  - a. Climbing up slope after departure may result in you unconsciously climbing more steeply than desired causing loss of airspeed.
  - b. If the winds are light and variable, takeoff down slope is generally more desirable than takeoffs upslope -
  - c. If a short field takeoff is required in a Cessna 172, flaps should not be used because the extra drag will increase your takeoff distance.
  
5. When flying over both mountains and valleys, you should maintain a clearance of at least \_\_\_\_\_ above the lowest terrain.
  - a. 1,000 feet
  - b. 2,000 feet
  - c. 3,500 feet

6. When a strong wind flows over mountains, a phenomenon may occur that is known as:
  - a. Mountain Wave
  - b. Standing Lenticular
  - c. Both a and b
  
7. One of the requirements for a mountain wave is:
  - a. A wind profile which shows a decrease in wind velocity with altitude near the mountain top level.
  - b. Thunderstorm activity near the mountains-
  - c. Wind flow that is perpendicular to the range, with velocities of 25 knots or more at mountain top level.
  
8. Which one of the following would produce the most severe turbulence?
  - a. Near stratus cloud formations.
  - b. Beneath a Lenticular cloud.
  - c. Within two miles of a towering cumulus clouds.
  
9. (True/False) When crossing a ridge, the flight path should be at a 90 degree angle to the ridge so that the pilot has a better judge of its height.
  
10. (True/False) At all times, the pilot should be in a position to turn and fly downhill, in the event terrain clearance becomes questionable.
  
11. (True/False) When flying through a valley or canyon, the pilot should fly right down the middle because it is the safest place for turbulence.
  
12. Which statement is most accurate?
  - a. Never fly into snow or rain showers which obscure the terrain. Use good judgment and the 180 degree turn before you lose forward vision and become a statistic.
  - b. Flying on instruments or on top of an overcast, if you are not instrument rated, current and flying properly equipped aircraft, can save your life.
  - c. Depth perception is best when attempting to land on unbroken snow covered surfaces.
  
13. What is one of the two fundamental requirements for structural ice formation in flight?
  - a. aircraft descends from freezing temperatures into rain.
  - b. the aircraft must be flying through visible moisture in the form of rain or cloud droplets.
  - c. aircraft is flying through clouds and fog of ice crystals
  
14. The most favorable carburetor icing occurs:
  - a. when the temperature is between 20 and 40 degrees F
  - b. when the humidity is below 60 percent
  - c. when the temperature is between 49 and 60 degrees F

15. If you get caught in a "tight" canyon or pass area, the safest and perhaps the best course reversal procedure to use is a:
- hammerhead turn
  - steep turn
  - wing over
16. A rule of thumb for determining your approximate in-flight visibility is:
- use GPS to measurement of visibility.
  - The approximate visibility in miles will equal the number of thousands of feet above the surface with the surface is just visible over the nose of the aircraft. (i.e.; 2500 feet equals 2 ½ nautical miles)
  - measure the distance, on your chart, from your present position to what you just see on the ground
17. Which form of hypoxia is from lack of oxygen as a result of a high altitude?
- Stagnant hypoxia
  - Hypemic hypoxia
  - Hypoxic hypoxia
18. Assume an aircraft, climbing or descending, encounters a wind shear where a headwind shears to a calm or tail wind condition. At this instance the:
- Airspeed will increase, the nose will pitch up and the aircraft will gain altitude.
  - Airspeed will drop, the nose will pitch down, and the aircraft will begin to loose altitude.
  - Effects will be minimal and should not concern the pilot.
19. Which of the following statements would create the greatest hazard when taking off?
- An increasing headwind or decreasing tail wind.
  - Increasing tail wind, decreasing headwind.
  - Winds that are light and variable.
20. Which of the following statements best describes aviation forecasts?
- If poor weather is forecast to occur within three to four hours, the probability of occurrence is better than 80 percent.
  - The weather associated with fast moving cold fronts is the least difficult to forecast accurately.
  - Surface visibility is easier to forecast than ceiling height.

21. Forecasters can predict with reasonable accuracy:
- The time rain or snow will begin, within plus or minus five hours.
  - The time freezing rain will begin.
  - The location and occurrence of severe turbulence.
22. The optimum approach speed during stable conditions is a speed equal to:
- 1.5  $V_{sl}$
  - 1.3  $V_{so}$
  - 1.3  $V_{fe}$
23. When going to a mountain airstrip for the first time, you should:
- Land at the very end on the runway.
  - Develop a *plan of action* on final
  - Make a power on, stabilized approach
24. The takeoff distance will increase due to frictional effects when operating on other than paved runways. The general rule-of-thumb for various surfaces is:
- Rough, rocky or grass – add 50%
  - Mud or snow – add 75% or more
  - Long Grass (4" or more) – add 30%
25. (True/False) Usually, crosswinds are very severe in canyons.

# USAF AERO CLUB KNOWLEDGE EXAM RECORD

Name: \_\_\_\_\_

Date Taken: \_\_\_\_\_

Type Exam:  Standardization     Instrument     Make & Model \_\_\_\_\_     Recurrency  
 Initial Solo     Solo Cross Country     Other:   **MOUNTAIN**  

Raw Score (%): \_\_\_\_\_

Date Corrected to 100%: \_\_\_\_\_

I certify all items were thoroughly debriefed and all questions answered

Pilot's Signature

Instructor's Signature

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)