

# **Mountain Flying Test**

## **Rocky Mountain Flight Center**



***Please do not mark on booklet***

1. The most efficient and reliable form of navigation available to the mountain pilot is:
  - a) Pilotage
  - b) GPS navigation
  - c) Electronic, i.e. VOR and NDB
2. When crossing a ridgeline or mountain pass, which technique should be employed?
  - a) When approaching from the windward side, approach at a 90 degree angle to minimize the time you are exposed to downdrafts, depart at a 45 degree angle to take advantage of updrafts.
  - b) Irrespective of which side you approach the pass (windward, leeward), approach and depart at a 90 degree angle to minimize your time over high terrain.
  - c) Approach at a 45 degree angle so that you have a smaller turn to make away from the ridge or pass if something goes wrong and depart as quickly as possible at a 90 degree angle.
3. You are approaching a pass using the recommended technique and you experience a downdraft, you should:
  - a) Stay as calm as possible and continue flying the plane, remember air does not flow through the ground so you will be okay.
  - b) Execute a turn toward lowering terrain and away from the ridge or pass.
  - c) Immediately apply full power and pitch the plane for  $V_x$ .
4. Due to the difference in the True Airspeed (TAS) at higher altitudes, with respect to landing speeds, you should:
  - a) Adjust your approach speed to a lower indicated airspeed (IAS).
  - b) Maintain your approach speed at the recommended indicated airspeed (IAS).
  - c) Adjust your approach speed to a higher indicated airspeed (IAS).
5. What effect does an increase of density altitude have on turn radius should you have to turn around in a canyon?
  - a) It will decrease turn radius.
  - b) It will have no effect on turn radius.
  - c) It will increase turn radius.
6. When approaching a ridgeline or pass with the intention of crossing it, what minimum altitude above the pass should you plan for?
  - a) 1000 feet minimum but 2000 feet is safer.
  - b) 2000 feet minimum.
  - c) 2000 feet minimum but 4000 feet is safer.

7. Flight plans for the mountains should be:
  - a) Designed to fly across it all using the most direct routes.
  - b) Designed to be as accurate as possible utilizing roads, highways, drainage routes, and townships.
  - c) Designed to follow country roads exclusively.
8. The best time/s to conduct mountain flying is/are:
  - a) In the morning.
  - b) In the morning and late afternoon/evening.
  - c) In the late afternoon/evening.
9. When flying in the mountains, what quantity of fuel should be carried?
  - a) That amount necessary for the flight plus 30 minutes reserve.
  - b) That amount necessary for the flight plus 50% more.
  - c) That amount necessary for the flight.
10. During takeoff you should attempt to achieve:
  - a) Three quarters ( $\frac{3}{4}$ ) of your takeoff speed by half ( $\frac{1}{2}$ ) of the runway distance.
  - b) Takeoff speed by three quarters ( $\frac{3}{4}$ ) of the runway distance.
  - c) Half ( $\frac{1}{2}$ ) of your takeoff speed by three quarters ( $\frac{3}{4}$ ) of the runway distance.
11. You should carry an appropriately equipped survival kit when flying in the mountains during which period?
  - a) Winter only.
  - b) October 15 through April 1.
  - c) Anytime.
12. Fire and smoke are considered international distress signals, what item/s on an aircraft could you burn to alert rescuers of your position?
  - a) Tire.
  - b) Fuel.
  - c) Seats.
13. Leaning of the fuel/air mixture as you climb is necessary because:
  - a) The volume of the air changes significantly with altitude.
  - b) The mass of the air changes significantly with altitude.
  - c) The mass of the fuel changes significantly with altitude.
14. During preflight inspection when aircraft fueling has NOT occurred, you should inspect the fuel quality:
  - a) Only if snow or rain has occurred since the last flight.
  - b) Only if hot/humid conditions have existed since the last flight.
  - c) Every time before flight regardless of existing conditions.

15. During climb, you should lean your normally aspirated engine every:
- a) 1000 feet.
  - b) 2000 feet.
  - c) 3000 feet.
16. All reasonable guidance suggests that when flying in the mountains your aircraft should be loaded within C of G limits and:
- a) May be loaded to 100% of the manufacturer recommended gross weight.
  - b) Should not be loaded to a weight greater than 85% of the manufacturer recommended gross weight, the remaining 15% should be used for survival gear.
  - c) Should not be loaded to a weight greater than 90% of the manufacturer recommended gross weight.
17. You are planning to depart Leadville (9927 feet MSL), the AWOS reports the temperature to be 25 degrees Celsius and the pressure to be at 28.80 inches Hg, what is the density altitude?
- a) 14,500 feet.
  - b) 13,200 feet.
  - c) 11,575 feet.
18. On a reasonable day, updrafts may be anticipated on the:
- a) Leeward side of a ridgeline.
  - b) Windward side of a ridgeline.
  - c) In the center between the two ridgelines.
19. As a general rule of thumb, airflow patterns associated with a valley may be described as:
- a) Into a valley in the morning and out of a valley in the afternoon/evening.
  - b) Due to the higher surrounding terrain, airflow patterns generally remain stagnant in the valleys.
  - c) Out of a valley in the morning and into the valley in the late afternoon/evening.
20. If winds aloft are forecast to be 35 knots, the winds at mountain top, ridgelines, and passes should be anticipated to be:
- a) About 35 knots also.
  - b) Much less than 35 knots.
  - c) Much greater than 35 knots.
21. Which statement best describes mountain weather?
- a) Area forecasts and other weather products obtained from flight service stations can be relied on to describe the weather patterns across your route of flight.

- b) In the mountains, the weather is always changing.
  - c) Calling qualified weather observers (police, forest rangers) will be your only accurate source of mountain weather.
22. What wind at mountain tops flow perpendicular to the ridgelines and at a speed greater than 25 knots, what weather phenomenon may be present?
- a) Mountain wave.
  - b) Standing lenticular altocumulus cloud.
  - c) Downdraft exceeding 1000 foot per minute.
23. Hypoxia describes the physiological condition of:
- a) A lack of oxygen at the tissue level of the body.
  - b) A lack of oxygen in the atmosphere.
  - c) Too much nitrogen in the blood stream.
24. Federal regulations (FARs) require the use of supplemental oxygen when:
- a) Indicated altitude is higher than 12,500 feet for more than 30 minutes.
  - b) Pressure altitude is above 14,000 feet.
  - c) Indicated altitude is above 5000 feet.
25. In the mountains, you may experience false horizons, the actual horizon may be approximated by:
- a) The tops of the mountains when 5 miles away from them.
  - b) The bases of the mountains when 5 miles away from them.
  - c) By descending until level with the bases of the mountains.