



Avalanche Skills Training – Level 2

Pre-course Quiz
© 2011 Cyril Shokoples

This quiz is based on the 2nd edition of *Staying Alive in Avalanche Terrain* by Bruce Tremper.

It should take several hours to complete once you have read the book. The questions are easiest to answer while reading the book. It is a good idea to highlight important sections in the text for rapid review later or during the AST 2 course. These questions must be completed prior to attending AST2 courses run by Rescue Dynamics. They are also required to be completed for the ACC TNF Winter Leadership course courses when taught by one or more Rescue Dynamics instructors for the Alpine Club of Canada.

Chapter TWO – How Avalanches Work

1. In the past, avalanche prediction tended to concentrate only on the stability of the snowpack but recent work suggests that we also need to consider the _____ of the snowpack.

2. Contrast the bridging strength of the snowpack with the size of avalanches expected for both hard and soft slabs. What does this mean in practice?

3. Describe settlement and sintering.

4. When is temperature in the snowpack more critical?

5. Is snow sensitive to the rate at which it is deformed? What can cause rapid loading?

Chapter THREE - Terrain Management

6. Describe how the slope steepness of avalanches varies by climate in Canada:

7. What is the runout angle and how is it significant for picking a campsite in avalanche terrain?

8. Discuss anchors in the snowpack:

9. Discuss the pluses and minuses of slopes warmed by the sun:

10. Describe some clues for recognizing windslabs:

11. What is the significance of convex slopes in avalanche terrain?

Chapter FOUR – Weather

12. Discuss how snow distribution might vary in a storm with little wind, a storm with moderate wind and a storm with extremely high wind:

13. In Canada on peaks less than 4000m high is there generally more snow at upper elevations or at lower elevations?

14. How does humidity affect slab formation?

Chapter FIVE – Snowpack

15. A common mistake of beginning avalanche students is to concentrate on the _____
_____ instead of the _____.

16. What are the six major types of grains in the simplified version of the International Classification of Season Snow on the ground presented by Tremper? Describe their appearance in one line of text or less:

17. Name or describe two weak layers and two weak interfaces:

18. Three snow grain types are present in 2/3 of all avalanche accidents in Canada. What do you think they are?

19. Three snow grain types are often described as persistent (and often referred to in avalanche bulletins). What do you think they are?

Chapter SIX – Stability

20. What four observations does Tremper discuss as key obvious clues?

21. What can a ski pole test tell you?

22. Which is more important in terms of decision-making in avalanche terrain, the number of taps it takes to make a column fail in a compression test or how the snow fails during the loading of the column?

23. What are the five lemons referred to in this chapter?

24. List the seven active tests:

Chapter NINE – Rescue

28. List the nine items described in the *Strategy for Victims*:

29. Name two changes in rescue equipment or technique in the last decade that have radically altered the speed of recovering completely buried victims from the snow:

30. Tremper claims that “as history has repeatedly shown, technology often doesn’t save lives.” Tremper claims (and most avalanche experts agree) that this is due to an affect called:

Chapter TEN – The Human Factor

31. In the graphs on page 281 it is implied that the human factor was the primary factor in _____ of 41 avalanche accidents. It also suggest that the most common human factors in those accidents was _____ and _____.

32. What are the six common mental shortcuts that Tremper lists:

33. In your own words, what is *"The Stupid Line"*?

34. In your own words, describe *"Belief Inertia"*.

Reflection

35. What was the best part of this pre-course assignment?

36. What was the worst part of this pre-course assignment?
