

**MIDTERM II, MTN GEOGRAPHY**

**NAME** \_\_\_\_\_

**MARCH 9, 1999**

**SS#** \_\_\_\_\_

There are 150 possible points on this test. The amount of points vary with the questions. There is also an extra point question. I suggest that you scan the entire test before answering any questions. Good luck!

- 1 After a glacier retreats, sediments that were deposited in a sub-glacial stream form an \_\_\_\_\_ (3 pts).
- 2 When two glaciers merge, their lateral moraines form a (n) \_\_\_\_\_ (3 pts).
- 3 An ice pinnacle on the top of a glacier is called a(n) \_\_\_\_\_ (3 pts).
- 4 A semicircular bowl-like depression carved into the side of a mountain by a small glacier is called a(n) \_\_\_\_\_ (3 pts).
- 5 For a glacier, if the annual mass gain above the equilibrium line is greater than the annual mass loss below the equilibrium line, the glacier is in a(n) \_\_\_\_\_ condition (3 pt).
- 6 For an avalanche to occur, there must be a \_\_\_\_\_ (3 pts) layer of snow over a \_\_\_\_\_ (3 pts) layer of snow.
- 7 The type of solid water intermediate in time and density between seasonal snow and glacial ice is called \_\_\_\_\_ (3 pt).
- 8 The humidity in the pore space of a seasonal snowpack is always about \_\_\_\_\_ (3 pt).
- 9 The primary factor causing pattern ground is \_\_\_\_\_ (3 pt).
- 10 Define glaciers (5 pts).
  
- 11 Define relative humidity (5 pts).



17 What is depth hoar and under what meteorological conditions does it form (10 pt)?

18 It is oft said "*Going up a mountain is like going polarward in latitude.*" Defend or refute this statement (10 pt).

You are a mountain guide for a trendy, posh, back-country skiing outfit. You have been charged with finding a suitable location for a backcountry yurt for use by overnight city-slicker-type ski tourers who want to maximize powder skiing yet have the warmest air temperatures possible. Detail where you would place the yurt and explain why. Use these terms in your answer: adret, ubac, inversion layer, cold-air drainage, snow bombs, slope angle, aspect, solar radiation, bubbling brook, wind (20 pts).

Draw a slab avalanche and label these items: stauchwall, flank, crown, bed, area of tension, area of compression, and area of shear stress. (20 pts).

What are Foehn winds and what causes them to occur? Use these terms in your answer: mountain barrier, air temperature, dry adiabatic, dew point. Illustrate your answer with a diagram. (20 pts).

**EXTRA CREDIT**

Some scientists speculate that global warming may cause glaciers to advance in Antarctica. Explain why this may happen (10 pts).