

1. The most important stress opposing a slope's shear stress is imparted by:
 - A. Running Water
 - B. Earthquakes
 - C. Frost Wedging
 - D. Gravity
 - E. Uplift

2. Water can encourage mass flow by:
 - A. Reducing friction between grains
 - B. Undercutting a steep slope
 - C. Weathering bedrock to clay minerals
 - D. Promoting mechanical weathering
 - E. All of the above

3. Which of the following does not promote mass movement:
 - A. Steep slopes
 - B. Deforestation
 - C. Intense precipitation
 - D. Climate change into more tropical conditions
 - E. Climate change into colder conditions

4. What type of weathering is prevalent in halite and carbonate environments:
 - A. Hydrolysis
 - B. Oxidation
 - C. Dissolution
 - D. Unloading
 - E. All of the above

5. Surface tension is greatest when_____.
 - A. Sand is dry
 - B. Sand is moist, but not saturated with water
 - C. Sand is saturated with water
 - D. Sand is over saturated with water
 - E. Surface tension is the same in all scenarios

6. What geologic processes created the Niagara Falls?

7. What is the likely progression of events for the dominant mechanical weathering in the Canadian Shield?

With the information derived from the experiment in class, answer the following questions.

Length of wood: 80cm

Height of slope when block moves (dry): 58 cm

Height of slope when block moves (wet): 30 cm

Mass of Styrofoam block: 2.9 grams

Gravity = 9.8m/s^2

* $F_{\text{driv}} = mg\sin(\theta)$ and $F_{\text{res}} = \mu_{\text{fric}} \times mg\cos(\theta)$

8. What is the driving force when the foam block is dry?

9. What is the driving force when the foam is wet?

10. What would the value of μ_{fric} need to be for no motion to occur on a wet slope?