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## Geol 250 – Examination Two Group Questions

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1. A bucket has a volume of 10,000 milliliters. What is the volume of the bucket in **cm<sup>3</sup>**?
2. What would be the mass of water (in **kilograms**) that would fill the bucket in question #1?
3. What would be the mass (in **grams**) of a volume of mercury (density = 14 g/cm<sup>3</sup>) that would fill the bucket in question #1?
4. **[True or False]** A 100-year flood has an average recurrence interval of 1,000 years.
5. **[True or False]** In adiabatic cooling, the temperature does not change.
6. **[True or False]** 85% relative humidity means that 85% of a packet of air is composed of water.
7. During evaporation, latent heat is [ **absorbed / released** ] (*circle one*) by the evaporating material.
8. **[True or False]** Streams only flood when disturbed by human activity.
9. **[True or False]** High pressure systems are generally associated with the development of large weather systems like warm fronts and cold fronts.
10. Most of the Earth's freshwater is in what phase of matter [ **solid / liquid / gas** ] (*circle one*)?
11. To reach its dew point temperature, a packet of unsaturated air must usually be [ **heated / cooled** ]. (*circle one*)
12. Wind blows [ **clockwise / counterclockwise** ] (*circle one*) around the center of a low pressure system (a cyclone) in the northern hemisphere.
13. Dry air in the atmosphere is composed primarily of oxygen and what other gas?
14. What is the mathematical formula for calculating relative humidity?
15. Which greenhouse gas is removed from the atmosphere during photosynthesis?
16. What is a stream's drainage basin?
17. A stream can carry material as dissolved load, suspended load or bed load. What is meant by bed load?
18. What source of energy is primarily responsible for the skyward (upward) movement of water vapor in the hydrologic cycle?
19. What is the *defining difference* between hurricanes and tropical storms (i.e. what has to change for a tropical storm to be considered a hurricane)?
20. Why is detecting unstable air vitally important in weather forecasting?
21. What is the opposite of melting?
22. Why is the troposphere warmest at low altitude?
23. Why do streams flow downhill?
24. Define: natural levee.
25. Briefly describe two severe hazards (i.e., things that can kill you) commonly associated with thunderstorms.