**GeoSci 1060 – Exam 2 Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Describe how to complete an assessment of geological hazards. Use the terms hazard, risk and vulnerability in your answer. Use your notes and the information on pages 124-127 of your text.
2. Describe why geologists and other scientists forecast rather than predict geological hazards. Include the 4 parts of a forecast in your answer. Use your notes and the information on pages 124-127 of your text.
3. As discussed in class, two of the major concepts in environmental studies are population growth and sustainability. Summarize the information section 5.5 of your text (pages 130-133) about population, Land Use and Hazards.
4. Use you notes and information in your text to describe the types of landslides, role of earth materials, slope, climate, water and time in determining the likelihood of a landslide.
5. Define fault and the earthquake cycle/elastic rebound theory. Also, list the 3 rules of energy in your answer, and list the two main ideas we discussed regarding earthquakes?
6. Describe how to find an earthquake epicenter and an earthquake magnitude. As part of the answer indicate how many magnitude 7 (Wasatch) earthquakes it would take to equal the energy released during a magnitude 9 (Japan) earthquake.
7. Describe the main types of volcanoes and the type of plate boundary associated with each type of volcano. Give an example (St Helens etc.) of each type of volcano and indicate the location and name of the largest volcanic eruption in historical times.
8. What is magma and what are the main properties of magma. Why do some volcanoes explode and others erupt more quietly? Which type usually explodes? Also, briefly describe the VEI. Use class notes and text as needed.
9. What happened at Nevado del Ruiz and Mt Pinatubo in terms of loss of human life, and why is hazard communication important? Use your notes from class discussion and text on pages 277 and 132-133.
10. Summarize the information in sections 6.1 and 6.5 of your text about Historical Use and Effects of Land Use Changes as related to flooding.
11. Summarize the information in section 6.8 of your text about Urbanization and Flooding.
12. What is a flash flood? What is a 100-year flood? Use the information on pages 148-150 of your text and these webpages: <http://water.usgs.gov/edu/100yearflood.html> and <http://www.8newsnow.com/story/26477250/i-15-closed-for-days-flooding-impacting-overton-logandale>
13. Describe the concepts of gradient and base level as applied to rivers and streams. How do dams affect this process?
14. Use the information in your book (section 7.3) and notes and describe the ideas of driving force, resisting force and slip surface as used in landslide studies. As part of the answer list some ways to prevent landslides (things you should and should NOT do).