

**Homework 8.**

**Due: 3:35pm, Monday November 28, 2005.**

Please use a word processor for preparing your answers.

**QUESTION 1.**

Building on your glossary you developed for homework 1 being certain to pay attention to organization, layout and sources:

- 1) Revise your entries from homework 1. Be sure to include the original entries **and** the revised entries, indicating which is which. If you do not wish to revise your original submission include the entries and explain why you are satisfied with these.
- 2) Develop entries for the following terms (used by Dr. Thornton in his lecture 11/14/05):
  - a. Horizontal loads
  - b. Alluvial riverbed
  - c. Riprap
  - d. Redundancy
  - e. Factor of safety
  - f. Forensic engineering
  - g. Isotropic material
  - h. Homogenous material
  - i. Tuned Mass Damper
- 3) Add 10 additional entries based on material covered in class or by guest speakers over the course of the semester.

**QUESTION 2.**

Explain why tall buildings are safer in an earthquake than low rise buildings.

**QUESTION 3.**

For homework 3 you identified a structural failure of interest to you and provided a **one page** description and assessment of the failure. These failures were due to overloading, construction or design errors. Some structures fail due to neglect – failure to maintain the structure or failure to communicate information. Two such failures are

- 1) The Johnstown flood of 1889, and
- 2) The flooding of the Chicago tunnels in 1992.

Choose **one** of these failures and write a **one page** description and assessment of the failure. Be sure to discuss whether the failure could have been prevented and reference your sources.

#### **QUESTION 4.**

Explain what organizations the following acronyms stand for, the role of the organization and url for the website of the organization:

- 1) AASHTO
- 2) ASCE
- 3) ABET
- 4) ITE
- 5) ACI
- 6) AISC

**GRADING SHEET – HOMEWORK - CIEG 125 - Introduction to Civil Engineering.**

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

**This sheet MUST be stapled to the front of your homework.**

		Points awarded	Max points
General Presentation (5 points total)	Name, Date, Assignment #		1
	Neatness (don't forget to staple the sheets together in the correct order!)		2
	Spelling/Grammar		2
Question 1. (37 points total)	1) Revisions		7
	2)		
	a. Horizontal loads		2
	b. Alluvial riverbed		2
	c. Riprap		2
	d. Redundancy		2
	e. Factor of safety		2
	f. Forensic engineering		2
	g. Isotropic material		2
	h. Homogenous material		2
	i. Tuned Mass Damper		2
	3)		2
	a. Entry 1		2
b. Entry 2		2	
c. Entry 3		2	
d. Entry 4		2	
e. Entry 5		2	
f. Entry 6		2	
Question 2. (10 points total)	Explanation		10
Question 3 (30 points total)	Sources		5
	Description (location, date, nature of the structure, conditions under which failure occurred)		15
	Assessment (Why did failure occur? Could failure have been prevented?)		10
Question 4 (18 points total)	1) AASHTO		3
	2) ASCE		3
	3) ABET		3
	4) ITE		3
	5) ACI		3
	6) AISC		3
<b>TOTAL</b>			<b>100</b>