Chem 130: Chemistry for Funeral Services
Problem Set 10

Name: _____ Date: _____

Each question is worth one point. Show your work wherever calculations are required.

1. Describe in some detail the characteristics of one major class of biomolecules.

2. Why is peptide bond formation considered to be a neutralization reaction?

3. Show how formaldehyde cross-links protein molecules. How does cross-linking by gluteraldehyde differ?

4. What is an amphoteric substance? Give an important example related to proteins.

5. Describe what happens when the hemoglobin molecule breaks down. How does this affect embalming?

6. How does the secondary structure of proteins relate to hydrogen bonding? Describe one of the three we discussed in class and show how hydrogen bonding is important to its structure.

7. How is denaturation of a protein different from protein breakdown? How does it affect embalming?

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8. Describe key characteristics of enzymes and their role in biological processes. What is the lock and key model?

9. Describe how enzymes affect the decomposition process.

10. The chart below includes four of the processes involved in protein breakdown. Complete the chart.

Type of process	What happens?	How it affects embalming:
Digestion		
Hydrolysis		
Deamination		
Decarboxylation		