Chem 116 Quiz 8 Spring 2009

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Instructor: Martin Larter

1. You have isolated a glycerol membrane lipid. Upon reactions with a enzyme (Phospholipase) releases palmitic acid (C16: 0) , a fatty acid that has the same molecular mass as oleic acid (C18:1:∆9) and phosphoserine. Draw the structure of this lipid. Circle the polar portion(s) of the molecule and place square around its nonpolar region(s)
2. Which of the following fatty acids listed in question 1 would have a higher melting point and why.



1. Identify all of the following molecules that fit each category.

At least one structure will be appropriate for each category.

Example: contains phosphate: D, E\_\_\_\_

Is derived from cholesterol: \_\_\_\_\_\_\_\_\_\_\_

Considered a sphingolipid: \_\_\_\_\_\_\_\_\_\_\_\_



Considered a glycolipid \_\_\_\_\_\_\_\_\_\_\_\_\_

Considered a bile salt:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Considered a glycerophospholipid:\_\_\_\_\_\_\_\_\_\_







1. Give the products (structures) for three of the four following reactions:



1. Draw the structure of Ser-Phe-Gly at pH 12. Label the C-terminus and the N-terminus and circle the peptide bonds.

**Extra Credit: May 5th is the day that Cinco de Mayo is celebrated. What does this holiday commemorate.**