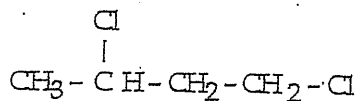


show all work for All Questions!

Name _____

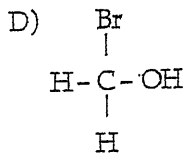
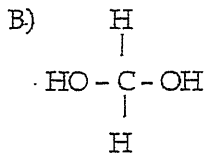
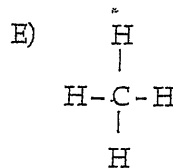
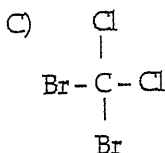
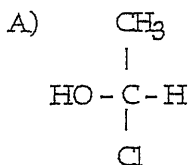
HORT ANSWER. Show all your work to answer these questions.

- 1) What is the IUPAC name of this compound?



- A) 1,4-dichlorobutane
- B) 1,3-dichlorobutane
- C) dichlorobutane
- D) 1,2-dichlorobutane
- E) 1,1-dichlorobutane

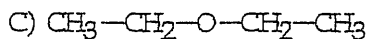
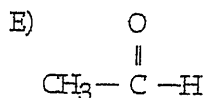
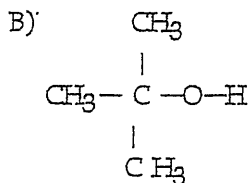
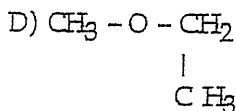
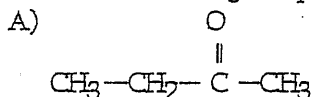
- 2) Which of the following compounds is chiral?



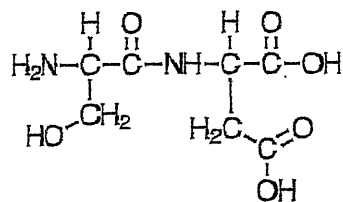
- 3) Denaturation of a protein _____.

- A) can only occur in a protein with quaternary structure
- B) changes the primary structure of a protein
- C) disrupts the secondary, tertiary, or quaternary structure of a protein
- D) hydrolyzes peptide bonds
- E) is always irreversible

- 4) Which of the following compounds contains an aldehyde?



Problem 5: Consider the following molecule.

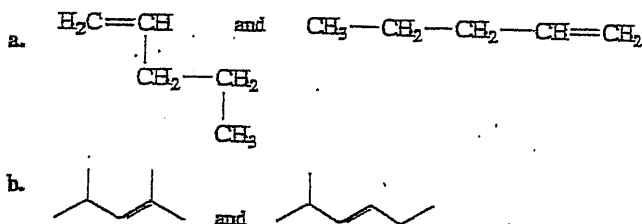


Circle the peptide bond.

6) Write a balanced equation for the combustion of a Hydrocarbon.

Show all your work to answer these questions. Explain, show support etc.

7) Indicate if the following pairs of structures represent structural isomers, cis-trans isomers, or the same molecule:



8) A carbohydrate that gives two molecules when it is completely hydrolyzed is known as a _____.

- A) trisaccharide
- B) disaccharide
- C) polysaccharide
- D) monosaccharide
- E) starch

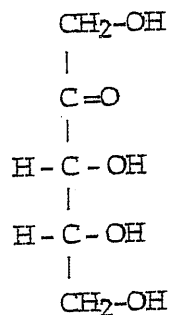
9) A monosaccharide that contains 4 carbon atoms, one of which is in an aldehyde group, is classified as a(n) _____.

- A) ketopentose
- B) ketotetrose
- C) aldopentose
- D) aldohexose
- E) aldotetrose

Show all Work

10) Ribulose has the following structural formula. To what carbohydrate class does ribulose belong?

10) _____



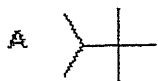
- A) aldotetrose
- B) ketohexose
- C) ketotetrose
- D) ketopentose
- E) aldopentose

Give the formula and name of the six strong bases.

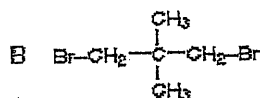
11)

12) Give the formula and name of the six strong acids.

13)



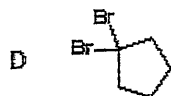
A Number of distinct carbon atoms: ...
 Number of distinct hydrogen groups: ...



B Number of distinct carbon atoms: ...
 Number of distinct hydrogen groups: ...



C Number of distinct carbon atoms: ...
 Number of distinct hydrogen groups: ...



D Number of distinct carbon atoms: ...
 Number of distinct hydrogen groups: ...



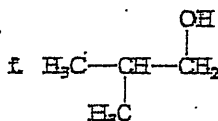
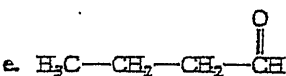
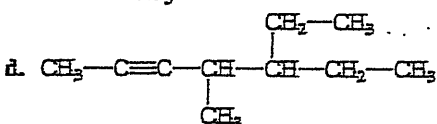
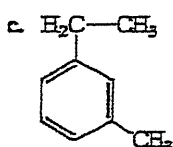
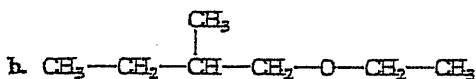
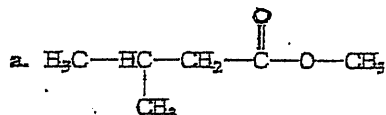
E Number of distinct carbon atoms: ...
 Number of distinct hydrogen groups: ...



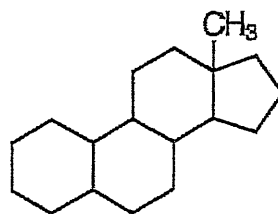
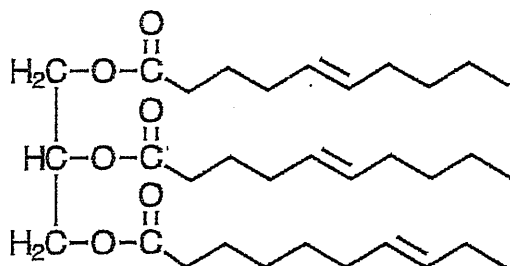
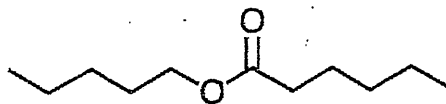
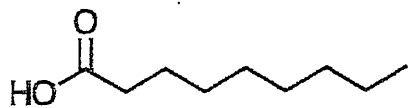
F Number of distinct carbon atoms: ...
 Number of distinct hydrogen groups: ...

14)

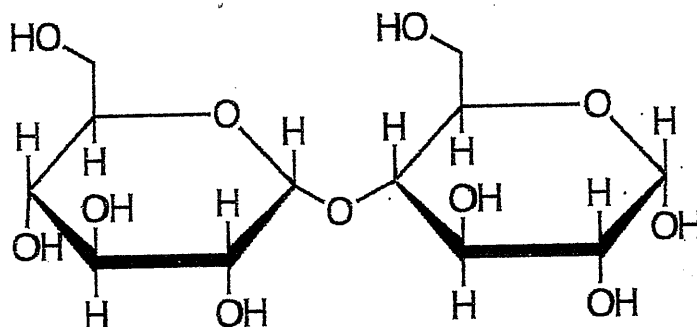
Identify each organic compound as an alkane, alkene, alkyne, aromatic hydrocarbon, alcohol, ether, aldehyde, ketone, carboxylic acid, ester, or amine, and provide a name for the compound.



Problem 15. Clearly indicate what type of lipid is shown below.

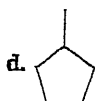
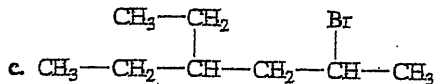
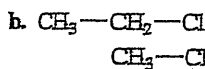
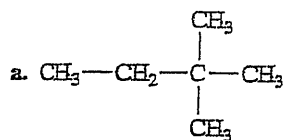


Problem 16. Consider the following molecule.

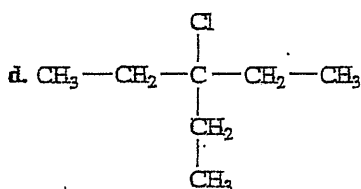
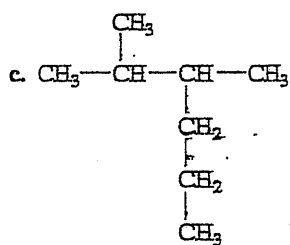
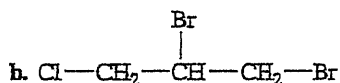
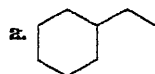


- Write the formula
- Calculate its Molar Mass.

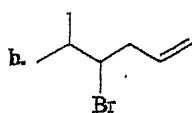
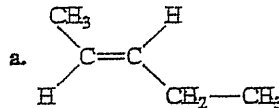
Give the IUPAC name for each of the following:



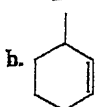
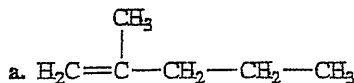
Give the IUPAC name for each of the following:



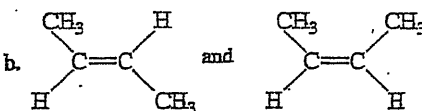
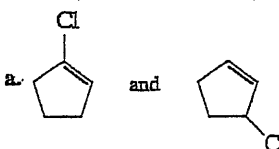
Give the IUPAC name for each of the following:



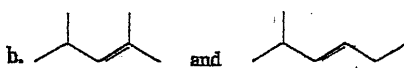
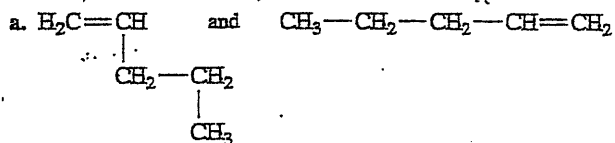
Give the IUPAC name for each of the following:



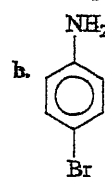
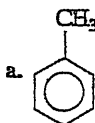
Indicate if the following pairs of structures represent structural isomers, cis-trans isomers, or the same molecule:



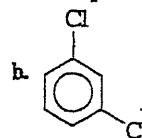
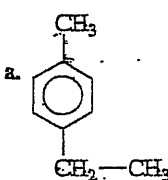
Indicate if the following pairs of structures represent structural isomers, cis-trans isomers, or the same molecule:



Name each of the following aromatic compounds:

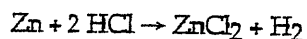


Name each of the following aromatic compounds:

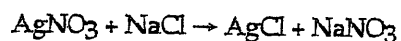


Show all work!

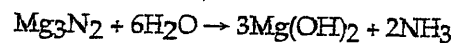
25) In this reaction, what is the substance oxidized?



26) In the reaction of silver nitrate with sodium chloride, how many grams of silver chloride will be produced from 100. g of silver nitrate when it is mixed with an excess of sodium chloride? The equation for the reaction is below.

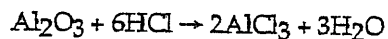


For the following question(s), consider the following balanced equation.

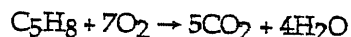


27) When 36.0 g of H_2O react, how many grams of NH_3 are produced?

28) Find the mass of AlCl_3 that is produced when 25.0 grams of Al_2O_3 reacts with HCl according to the following equation.



29) The following reaction is an example of a _____ reaction.



CHM 1032 Take-Home Exam #2 Chapters 4-6
SHOW ALL YOUR WORK for all problems YES MULTIPLE CHOICE

30 If there are 17 bottles of water on a counter in Publix, 17 is a(n)
_____ number.

31 Consider the chemical reaction shown below.



For this reaction write the mole-to-mole factor and the equality between;

a) Fe and O_2

b) Fe and Fe_2O_3

c) O_2 and Fe_2O_3