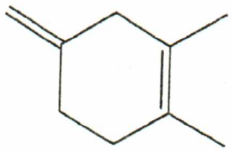
Name _____

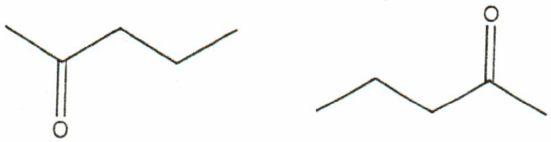
Lab Instructor Belyayeva Malik Mollica

Quiz Ia
February 22, 2016

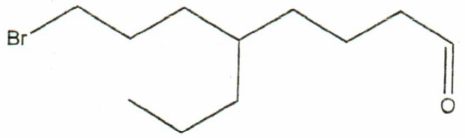
1. Convert the following molecule from line bond notation to a Lewis structure that shows all the carbon and hydrogen atoms.



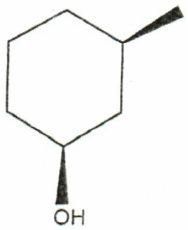
2. What is the relationship between the following two molecules?
Are they identical, constitutional isomers, stereoisomers or unrelated?



3. What is the official IUPAC name of the following molecule?



4. Draw both chair forms of the molecule shown below and circle the one that is lower in energy.

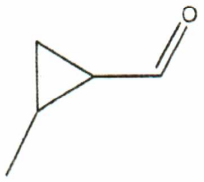


Name _____

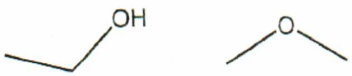
Lab Instructor Belyayeva Malik Mollica

Quiz Ib
February 22, 2016

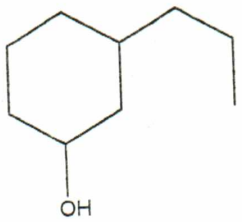
1. Convert the following molecule from line bond notation to a Lewis structure that shows all the carbon and hydrogen atoms.



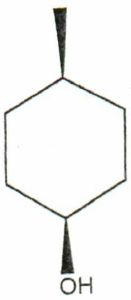
2. What is the relationship between the following two molecules?
Are they identical, constitutional isomers, stereoisomers or unrelated?



3. What is the official IUPAC name of the following molecule?



4. Draw both chair forms of the molecule shown below and circle the one that is lower in energy.

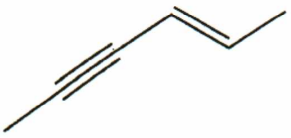


Name _____

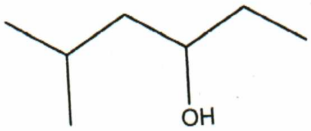
Lab Instructor Belyayeva Malik Mollica

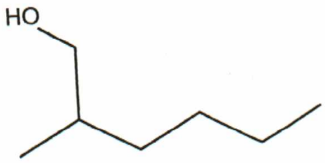
Quiz Ic
February 22, 2016

1. Convert the following molecule from line bond notation to a Lewis structure that shows all the carbon and hydrogen atoms.

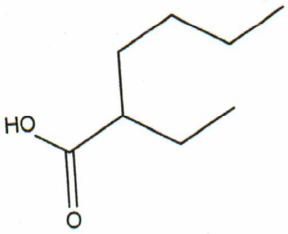


2. What is the relationship between the following two molecules?
Are they identical, constitutional isomers, stereoisomers or unrelated?

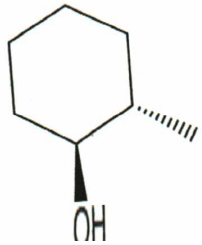




3. What is the official IUPAC name of the following molecule?



4. Draw both chair forms of the molecule shown below and circle the one that is lower in energy.

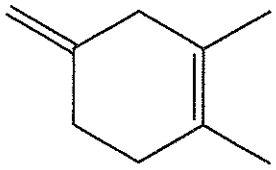


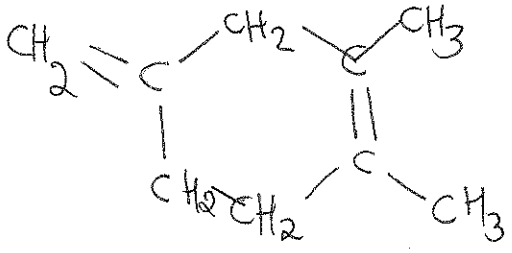
Name _____

Lab Instructor Belyayeva Malik Mollica

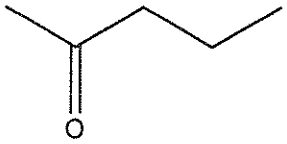
Quiz Ia
February 22, 2016

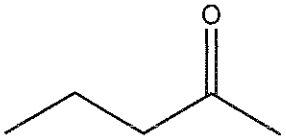
1. Convert the following molecule from line bond notation to a Lewis structure that shows all the carbon and hydrogen atoms.



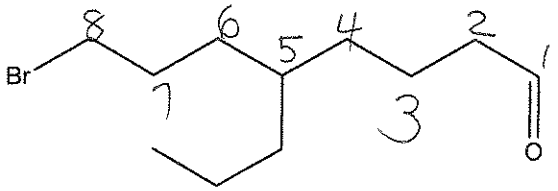


2. What is the relationship between the following two molecules?
Are they identical, constitutional isomers, stereoisomers or unrelated?



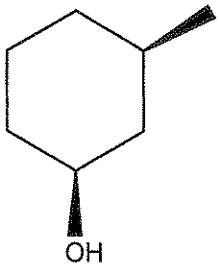


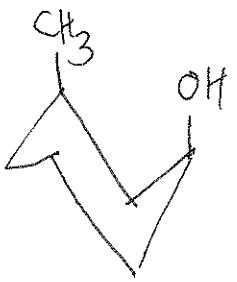
3. What is the official IUPAC name of the following molecule?



8-bromo-5-propyl octanal

4. Draw both chair forms of the molecule shown below and circle the one that is lower in energy.



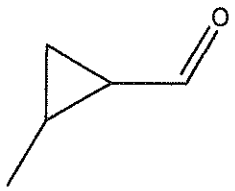


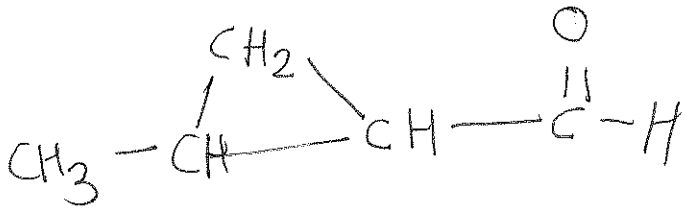
Name _____

Lab Instructor Belyayeva Malik Mollica

Quiz Ib
February 22, 2016

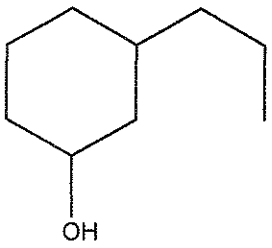
1. Convert the following molecule from line bond notation to a Lewis structure that shows all the carbon and hydrogen atoms.





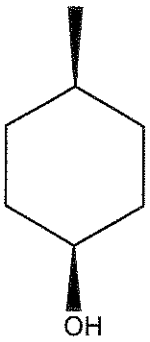
2. What is the relationship between the following two molecules?
Are they identical, constitutional isomers, stereoisomers or unrelated?

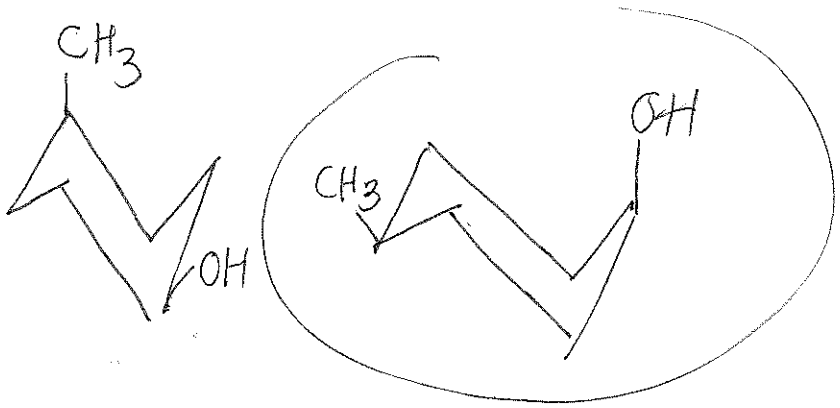
3. What is the official IUPAC name of the following molecule?



3-propyl-1-cyclohexanol

4. Draw both chair forms of the molecule shown below and circle the one that is lower in energy.



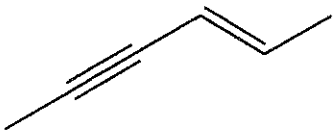


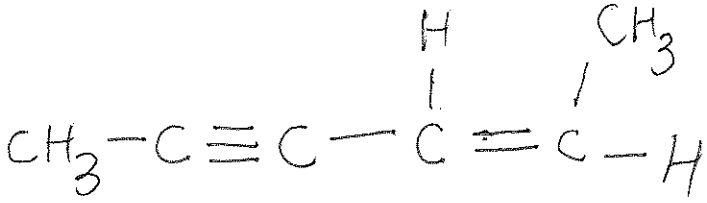
Name _____

Lab Instructor Belyayeva Malik Mollica

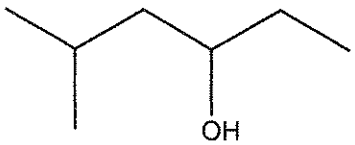
Quiz Ic
February 22, 2016

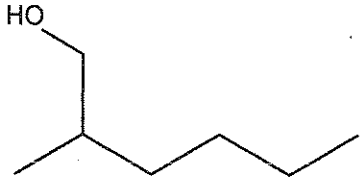
1. Convert the following molecule from line bond notation to a Lewis structure that shows all the carbon and hydrogen atoms.



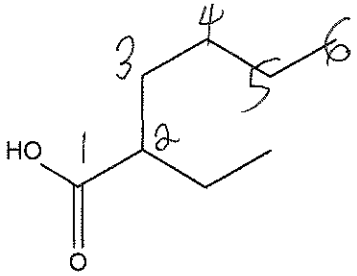


2. What is the relationship between the following two molecules?
Are they identical, constitutional isomers, stereoisomers or unrelated?



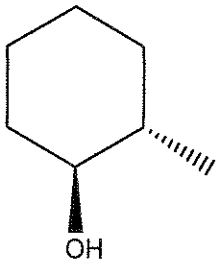


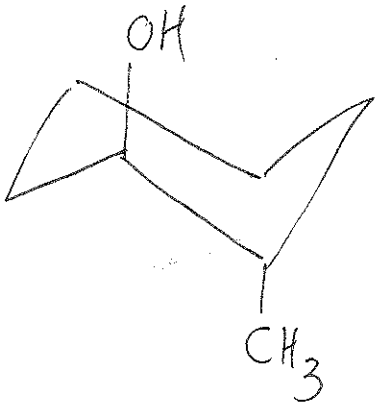
3. What is the official IUPAC name of the following molecule?

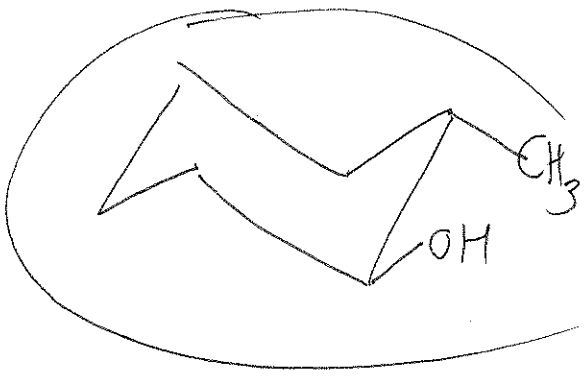


2-ethyl hexanoic acid

4. Draw both chair forms of the molecule shown below and circle the one that is lower in energy.





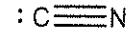


Name _____

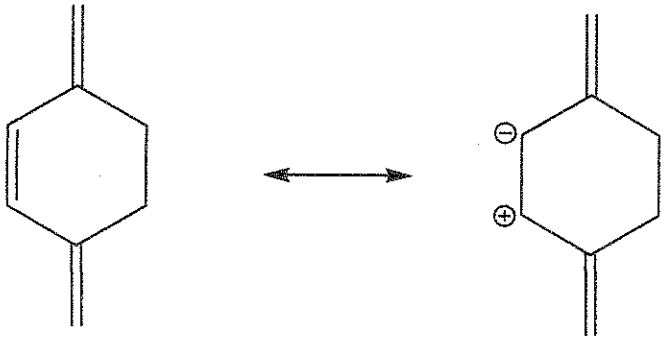
Lab Instructor _____

Quiz IIa
February 29, 2016

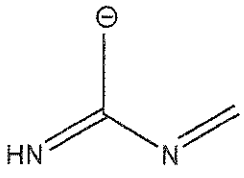
1. What is the formal charge on the C atom in the molecule shown below?



2. Two resonance forms of the same molecule are shown below. Draw arrows to show how the structure on the left would covert to the structure on the right and how the structure on the right would covert to the structure to the left.



3a. Draw a resonance structure for the molecule shown below.
3b. If your resonance structure has any formal charges, be sure to show them clearly.

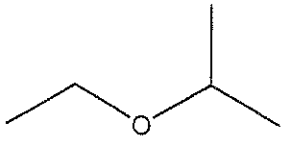


Name _____

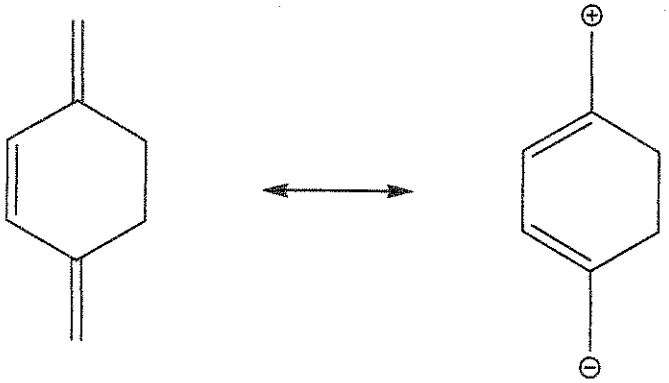
Lab Instructor _____

Quiz IIb
February 29, 2016

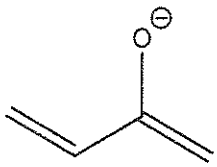
1. What is the formal charge on the O atom in the molecule shown below?



2. Two resonance forms of the same molecule are shown below. Draw arrows to show how the structure on the left would covert to the structure on the right and how the structure on the right would covert to the structure to the left.



3a. Draw a resonance structure for the molecule shown below.
3b. If your resonance structure has any formal charges, be sure to show them clearly.

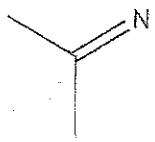


Name _____

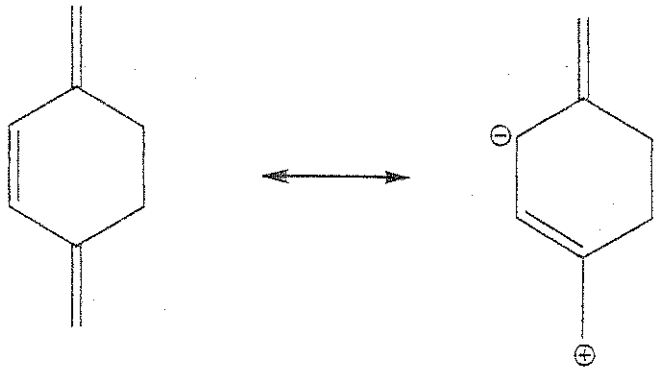
Lab Instructor _____

Quiz IIc
February 29, 2016

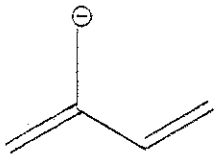
1. What is the formal charge on the N atom in the molecule shown below?



2. Two resonance forms of the same molecule are shown below. Draw arrows to show how the structure on the left would covert to the structure on the right and how the structure on the right would covert to the structure to the left.



3a. Draw a resonance structure for the molecule shown below.
3b. If your resonance structure has any formal charges, be sure to show them clearly.



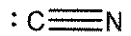
key

Name _____

Lab Instructor _____

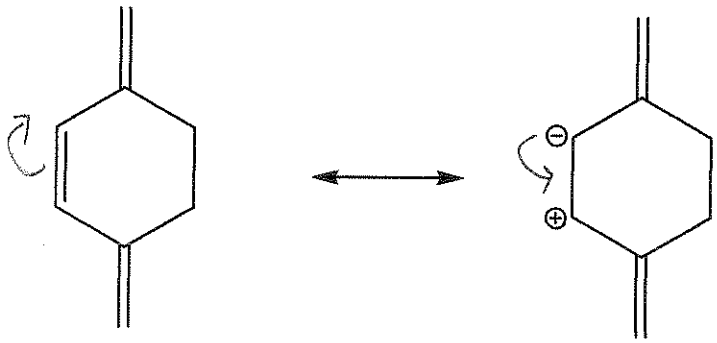
Quiz IIa
February 29, 2016

1. What is the formal charge on the C atom in the molecule shown below?

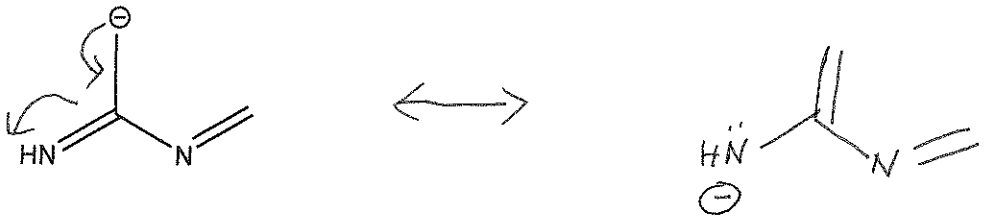


−1

2. Two resonance forms of the same molecule are shown below. Draw arrows to show how the structure on the left would covert to the structure on the right and how the structure on the right would covert to the structure to the left.



3a. Draw a resonance structure for the molecule shown below.
3b. If your resonance structure has any formal charges, be sure to show them clearly.



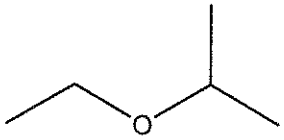
key

Name _____

Lab Instructor _____

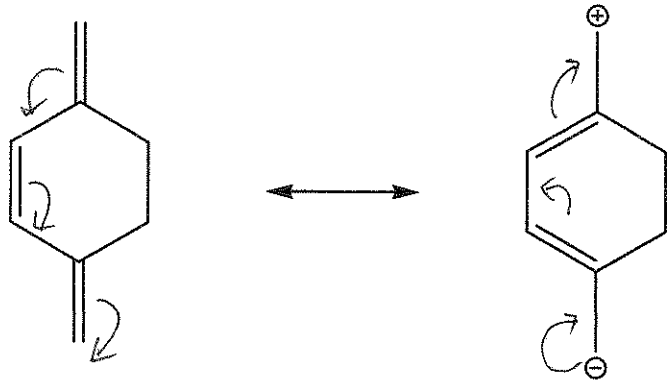
Quiz IIb
February 29, 2016

1. What is the formal charge on the O atom in the molecule shown below?



0 (zero)

2. Two resonance forms of the same molecule are shown below. Draw arrows to show how the structure on the left would covert to the structure on the right and how the structure on the right would covert to the structure to the left.



3a. Draw a resonance structure for the molecule shown below.
3b. If your resonance structure has any formal charges, be sure to show them clearly.

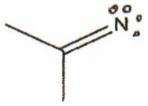
KEY

Name _____

Lab Instructor _____

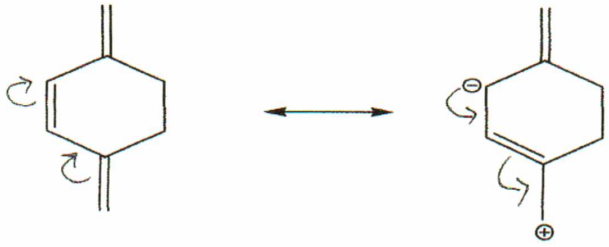
Quiz IIc
February 29, 2016

1. What is the formal charge on the N atom in the molecule shown below?

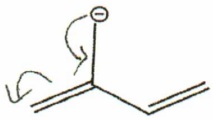


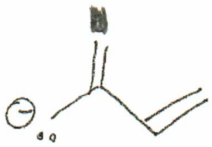
−1

2. Two resonance forms of the same molecule are shown below. Draw arrows to show how the structure on the left would covert to the structure on the right and how the structure on the right would covert to the structure to the left.



3a. Draw a resonance structure for the molecule shown below.
3b. If your resonance structure has any formal charges, be sure to show them clearly.



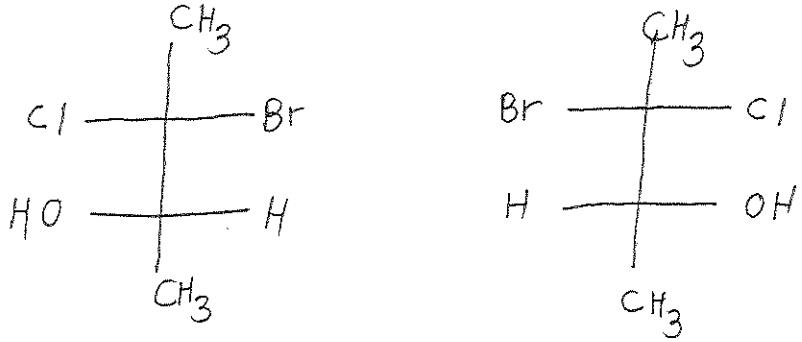


Name _____

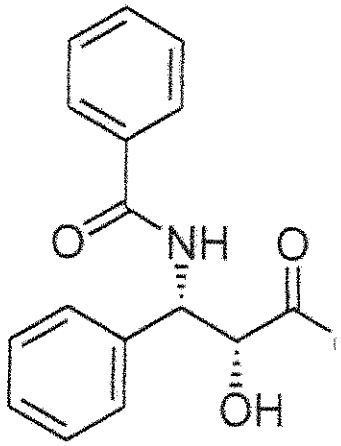
Lab Instructor Belyayeva Malek Mollica

Quiz IIIa
March 28, 2016

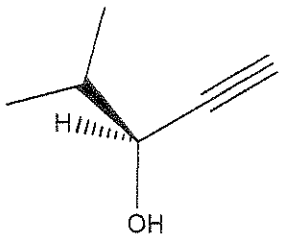
1. What is the relationship between the following two molecules? Are they identical, enantiomers, diasteriomers or constitutional isomers?



2. Label all chiral centers in the molecule shown below.



3. Determine the R/S configuration of the chiral center shown below. Make sure to clearly indicate the priority (1, 2, 3 or 4) of each group attached to the chiral carbon.

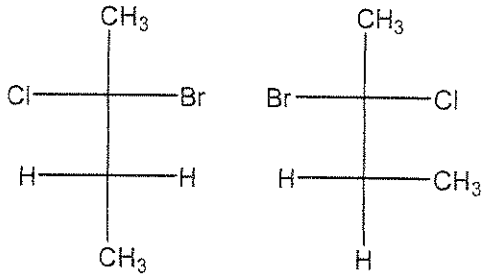


Name _____

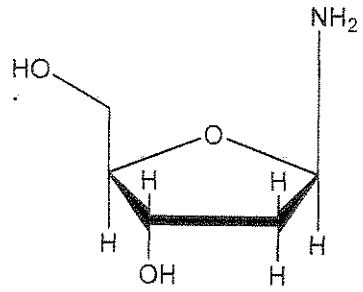
Lab Instructor Belyayeva Malek Mollica

Quiz IIIb
March 28, 2016

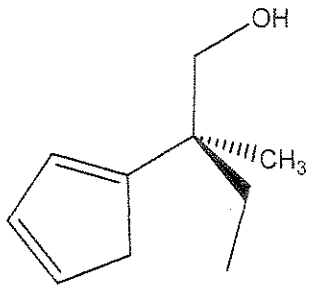
1. What is the relationship between the following two molecules? Are they identical, enantiomers, diasteriomers or constitutional isomers?



2. Label all chiral centers in the molecule shown below.



3. Determine the R/S configuration of the chiral center shown below. Make sure to clearly indicate the priority (1, 2, 3 or 4) of each group attached to the chiral carbon.

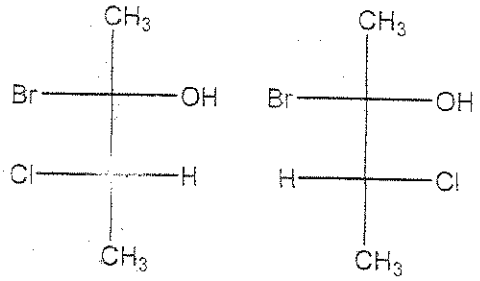


Name _____

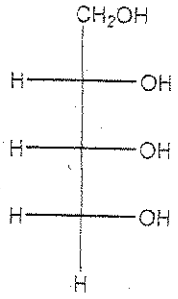
Lab Instructor Belyayeva Malek Mollica

Quiz IIIc
March 28, 2016

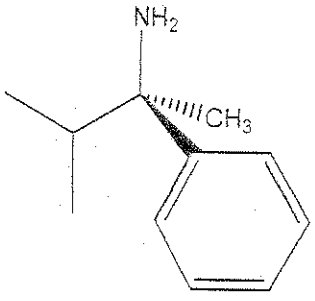
1. What is the relationship between the following two molecules? Are they identical, enantiomers, diasteriomers or constitutional isomers?



2. Label all chiral centers in the molecule shown below.



3. Determine the R/S configuration of the chiral center shown below. Make sure to clearly indicate the priority (1, 2, 3 or 4) of each group attached to the chiral carbon.

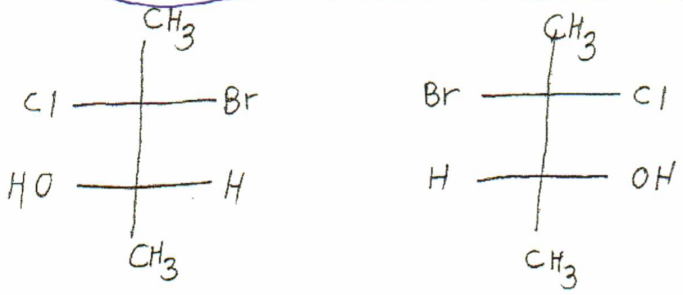


Name _____

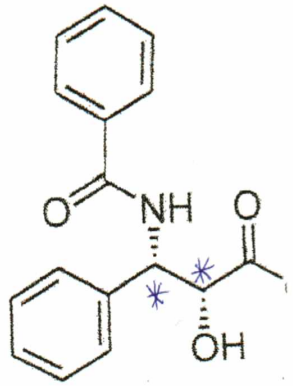
Lab Instructor Belyayeva Malek Mollica

Quiz IIIa
March 28, 2016

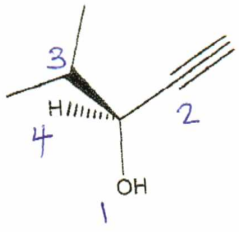
1. What is the relationship between the following two molecules? Are they identical, ~~enantiomers~~, diasteriomers or constitutional isomers?



2. Label all chiral centers in the molecule shown below.



3. Determine the R/S configuration of the chiral center shown below. Make sure to clearly indicate the priority (1, 2, 3 or 4) of each group attached to the chiral carbon.



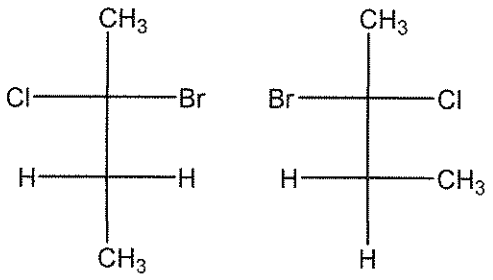
S

Name _____

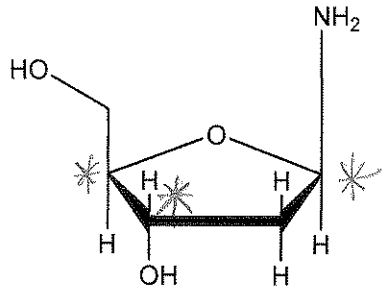
Lab Instructor Belyayeva Malek Mollica

Quiz IIIb
March 28, 2016

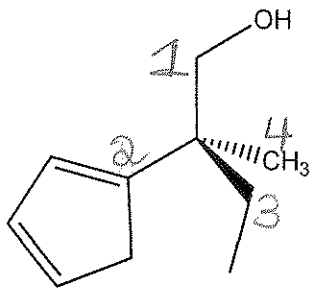
1. What is the relationship between the following two molecules? Are they identical, enantiomers, diasteriomers or constitutional isomers?



2. Label all chiral centers in the molecule shown below.



3. Determine the R/S configuration of the chiral center shown below. Make sure to clearly indicate the priority (1, 2, 3 or 4) of each group attached to the chiral carbon.



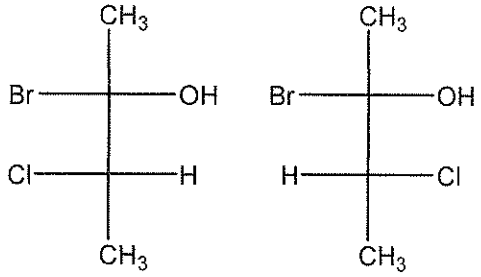
S

Name _____

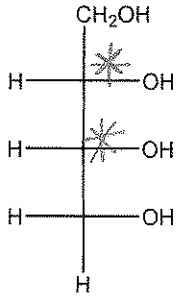
Lab Instructor Belyayeva Malek Mollica

Quiz IIIc
March 28, 2016

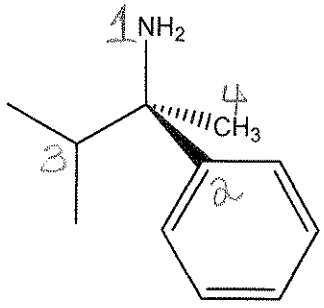
1. What is the relationship between the following two molecules? Are they identical, enantiomers, diasteriomers or constitutional isomers?



2. Label all chiral centers in the molecule shown below.



3. Determine the R/S configuration of the chiral center shown below. Make sure to clearly indicate the priority (1, 2, 3 or 4) of each group attached to the chiral carbon.



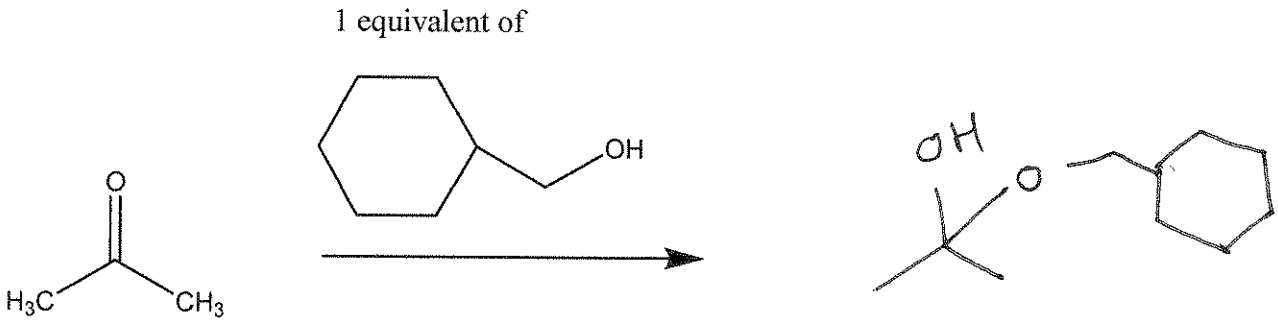
R

Name _____

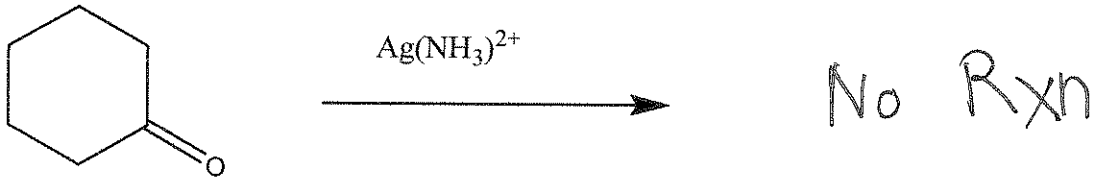
Lab Instructor Belyayeva Malek Mollica

Quiz IVa
April 6, 2015

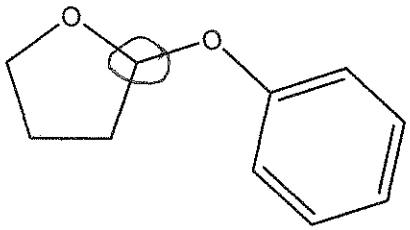
1. Give the product of the following reaction:



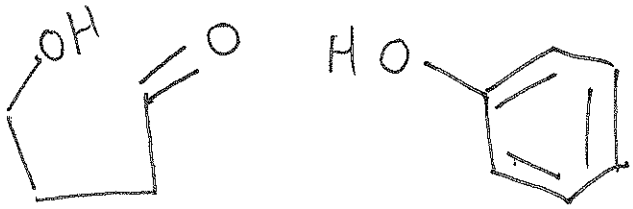
2. Fill in the missing reagent:



3a. Which functional group (acetal or hemiacetal) is shown in the molecule below?
3b. Draw the structures of the aldehyde and alcohol(s) that were used to synthesize this compound:



acetal

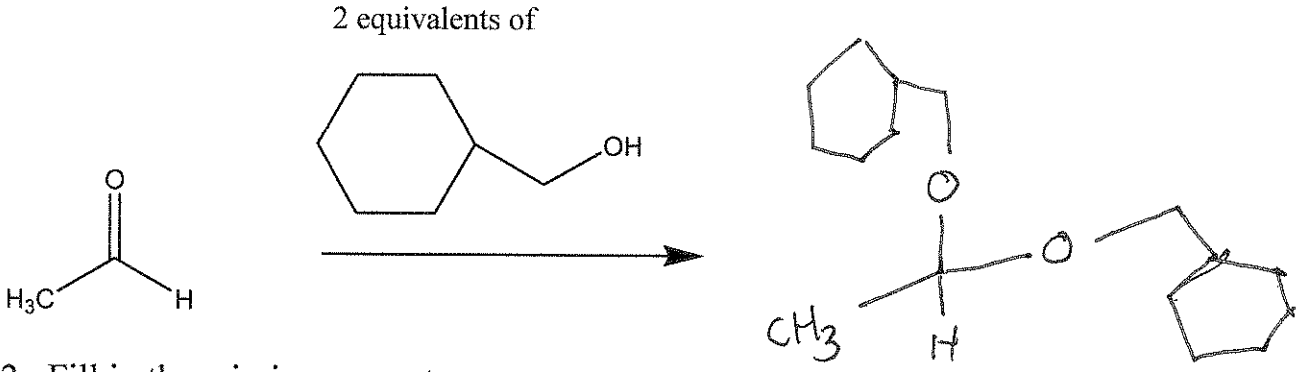


Name _____

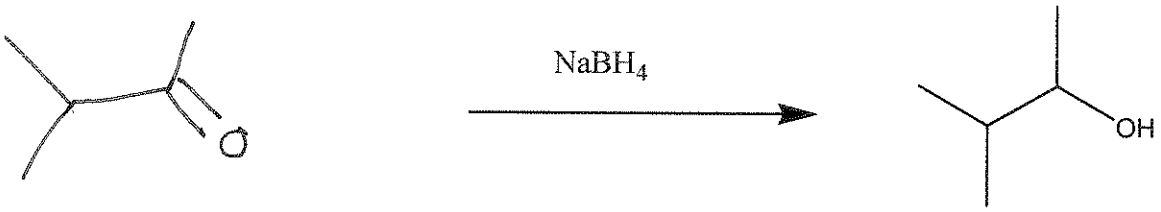
Lab Instructor Belyayeva Malek Mollica

Quiz IVb
April 6, 2015

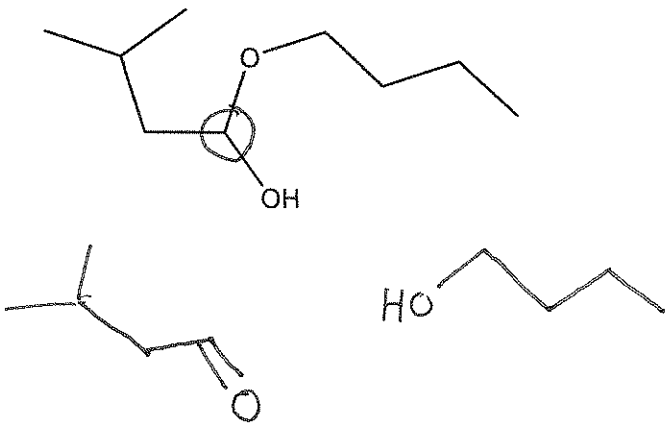
1. Give the product of the following reaction:



2. Fill in the missing reagent:



3a. Which functional group (acetal or hemiacetal) is shown in the molecule below?
3b. Draw the structures of the aldehyde and alcohol(s) that were used to synthesize this compound:

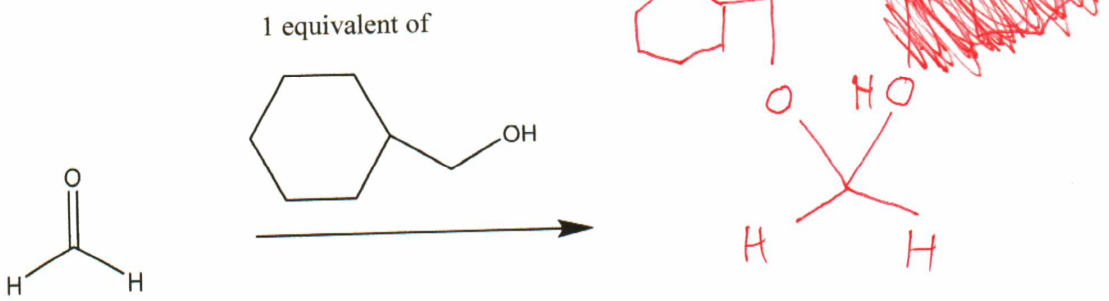


Name _____

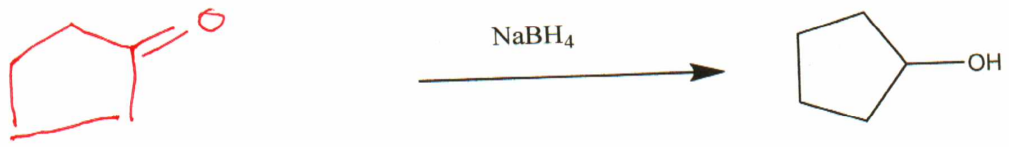
Lab Instructor Belyayeva Malek Mollica

Quiz IVc
April 6, 2015

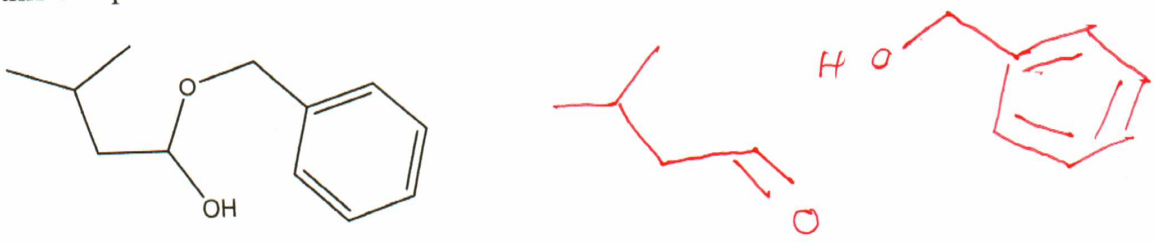
1. Give the product of the following reaction:



2. Fill in the missing reagent:



3a. Which functional group (acetal or hemiacetal) is shown in the molecule below?
3b. Draw the structures of the aldehyde and alcohol(s) that were used to synthesize this compound:

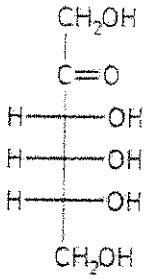


Name _____

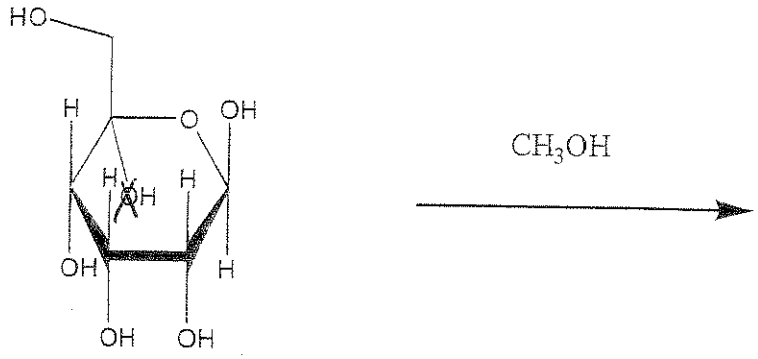
Lab Instructor Belyayeva Malek Mollica

Quiz Va
May 9, 2016

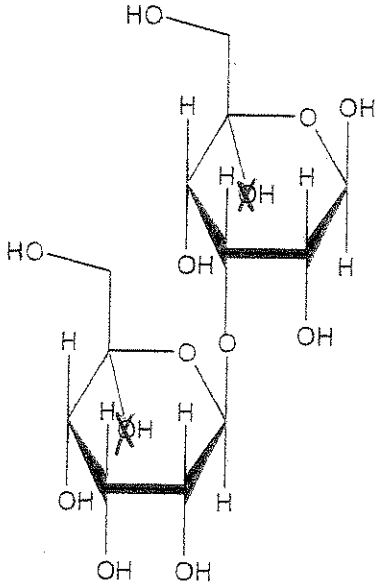
1. Convert the following sugar from the open form to the hemiacetal form.
   Draw a 5 membered ring.
   Draw the anomeric carbon with the OH group α (alpha).



2. Give the product of the following reaction:



3. Analyze the following disaccharide:
   a. Label the anomeric carbons with stars and indicate if they are alpha or beta.
   b. Which two carbons (give their numbers) link the two sugars together?
   c. Is this compound a reducing sugar? (Does it undergo oxidation with Benedicts' or Tollens'?)

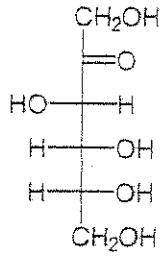


Name _____

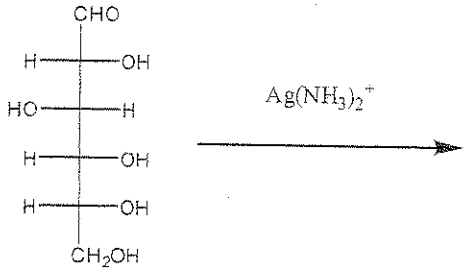
Lab Instructor Belyayeva Malek Mollica

Quiz Vb
May 9, 2016

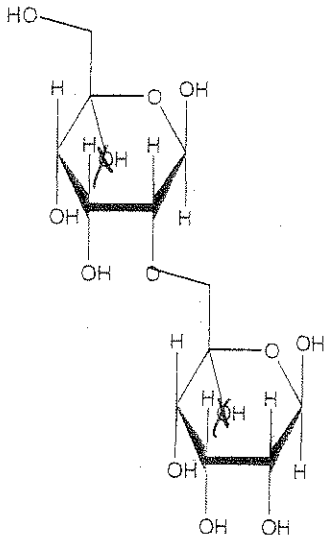
1. Convert the following sugar from the open form to the hemiacetal form.
   Draw a 5 membered ring.
   Draw the anomeric carbon with the OH group β (beta).



2. Give the product of the following reaction:



3. Analyze the following disaccharide:
   a. Label the anomeric carbons with stars and indicate if they are alpha or beta.
   b. Which two carbons (give their numbers) link the two sugars together?
   c. Is this compound a reducing sugar? (Does it undergo oxidation with Benedicts' or Tollens'?)

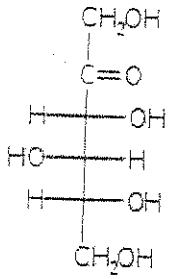


Name _____

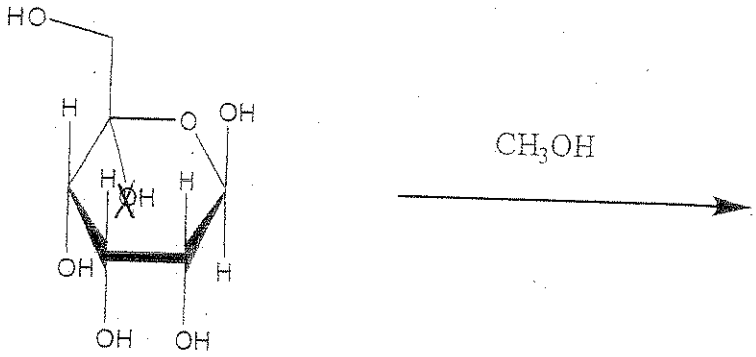
Lab Instructor Belyayeva Malek Mollica

Quiz Vc
May 9, 2016

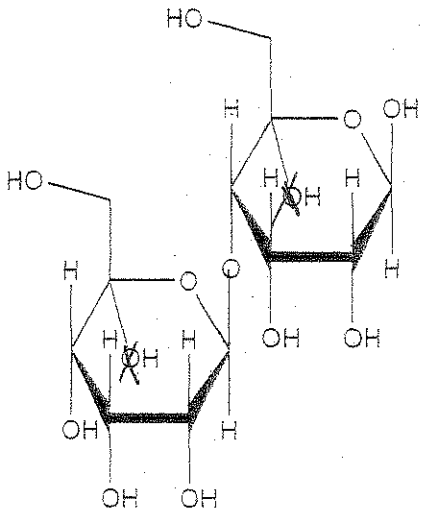
1. Convert the following sugar from the open form to the hemiacetal form.
   Draw a 5 membered ring.
   Draw the anomeric carbon with the OH group β (beta).



2. Give the product of the following reaction:



3. Analyze the following disaccharide:
   a. Label the anomeric carbons with stars and indicate if they are alpha or beta.
   b. Which two carbons (give their numbers) link the two sugars together?
   c. Is this compound a reducing sugar? (Does it undergo oxidation with Benedicts' or Tollens'?)

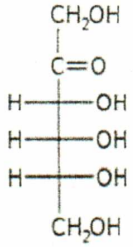


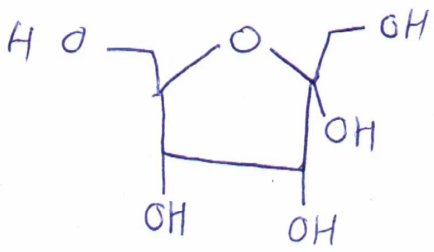
Name _____

Lab Instructor Belyayeva Malek Mollica

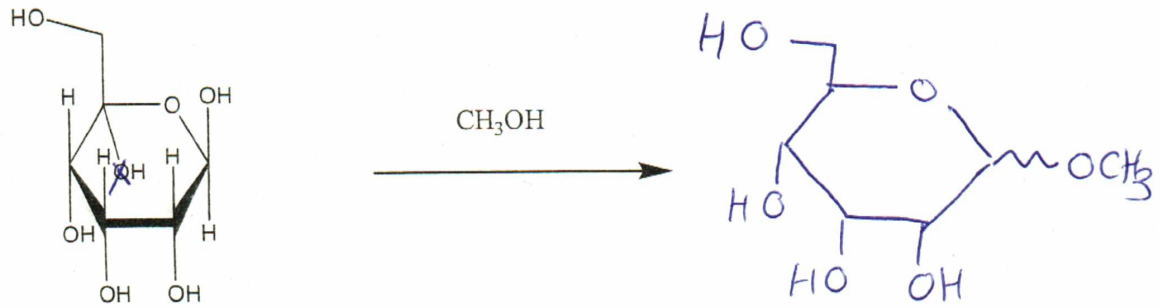
Quiz Va
May 9, 2016

1. Convert the following sugar from the open form to the hemiacetal form.
   Draw a 5 membered ring.
   Draw the anomeric carbon with the OH group α (alpha).

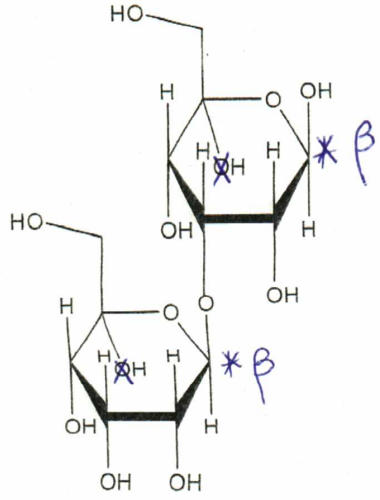




2. Give the product of the following reaction:



3. Analyze the following disaccharide:
   a. Label the anomeric carbons with stars and indicate if they are alpha or beta.
   b. Which two carbons (give their numbers) link the two sugars together? 1,3
   c. Is this compound a reducing sugar? (Does it undergo oxidation with Benedicts' or Tollens'?) yes

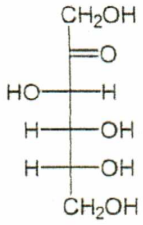


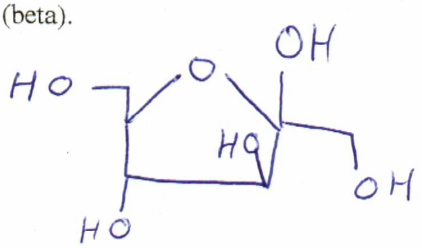
Name _____

Lab Instructor Belyayeva Malek Mollica

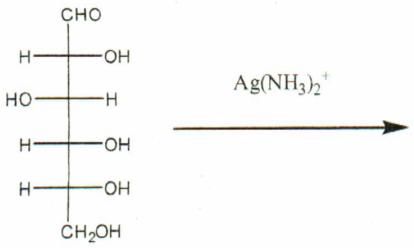
Quiz Vb
May 9, 2016

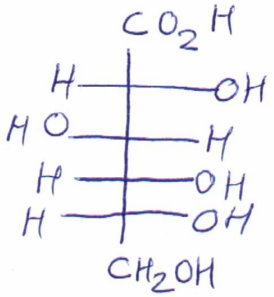
1. Convert the following sugar from the open form to the hemiacetal form.
   Draw a 5 membered ring.
   Draw the anomeric carbon with the OH group β (beta).



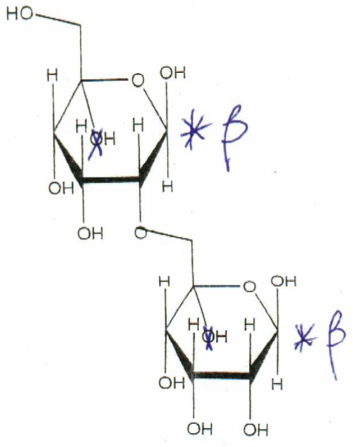


2. Give the product of the following reaction:





3. Analyze the following disaccharide:
   a. Label the anomeric carbons with stars and indicate if they are alpha or beta.
   b. Which two carbons (give their numbers) link the two sugars together? 2, 6
   c. Is this compound a reducing sugar? (Does it undergo oxidation with Benedicts' or Tollens'?) yes

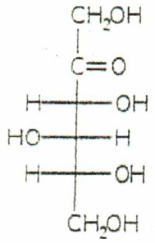


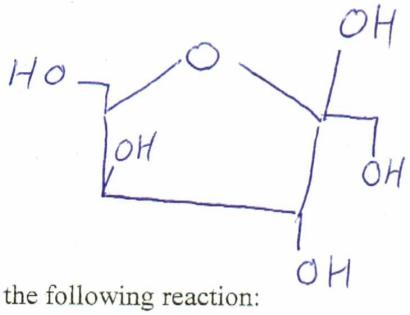
Name _____

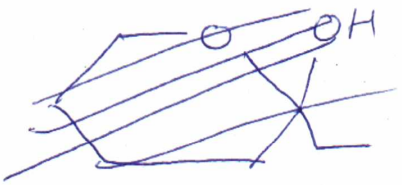
Lab Instructor Belyayeva Malek Mollica

Quiz Vc
May 9, 2016

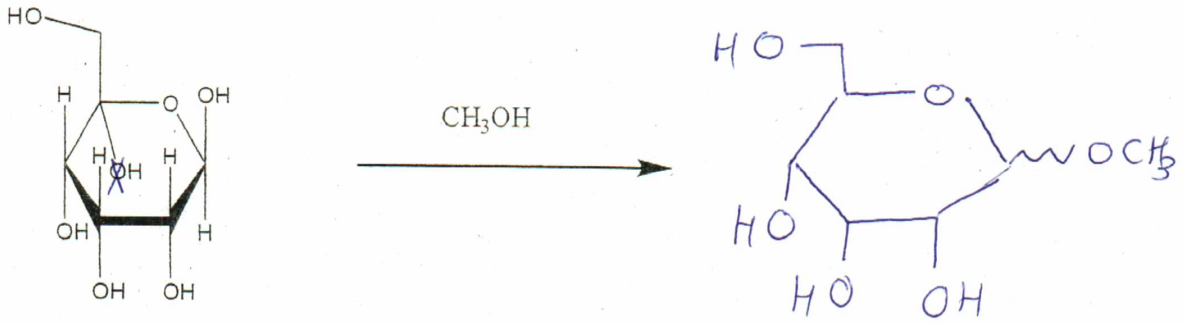
1. Convert the following sugar from the open form to the hemiacetal form.
   Draw a 5 membered ring.
   Draw the anomeric carbon with the OH group β (beta).



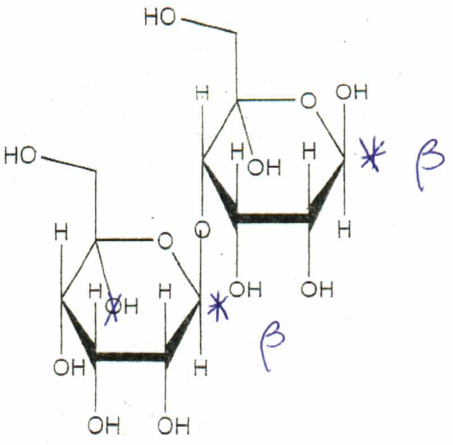




2. Give the product of the following reaction:



3. Analyze the following disaccharide:
   a. Label the anomeric carbons with stars and indicate if they are alpha or beta.
   b. Which two carbons (give their numbers) link the two sugars together? 1,4
   c. Is this compound a reducing sugar? (Does it undergo oxidation with Benedicts' or Tollens'?) yes

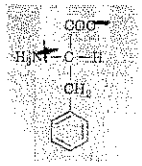


Name _____

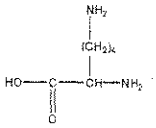
Lab Instructor Belyayeva Malek Mollica

Quiz 6a
May 16, 2016

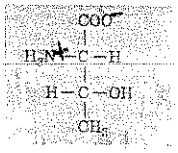
1. Does the following amino acid contain an acidic, basic, polar or nonpolar side chain?



2. Draw the zwitterion form of the following amino acid:

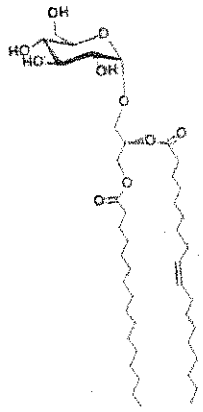


3. Construct a dipeptide GLU SER from the amino acids shown below. Make sure to draw the dipeptide in the form it would take in your body (at physiological pH):



GLU SER

4. Below is a lipid found in a cell membrane. CAREFULLY circle the parts of the lipid CANNOT participate in hydrogen bonding.

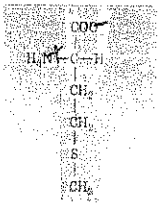


Name _____

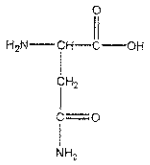
Lab Instructor Belyayeva Malek Mollica

Quiz 6b
May 16, 2016

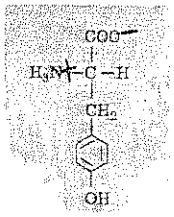
1. Does the following amino acid contain an acidic, basic, polar or nonpolar side chain?



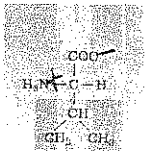
2. Draw the zwitterion form of the following amino acid:



3. Construct a dipeptide TYR VAL from the amino acids shown below. Make sure to draw the dipeptide in the form it would take in your body (at physiological pH):

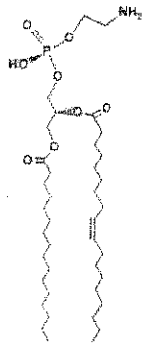


TYR



VAL

4. Below is a lipid found in a cell membrane. CAREFULLY circle the parts of the lipid CANNOT participate in hydrogen bonding.

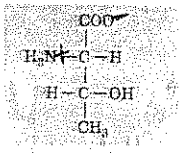


Name _____

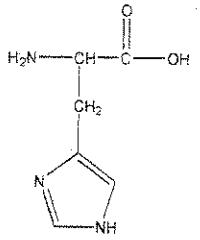
Lab Instructor Belyayeva Malek Mollica

Quiz 6c
May 16, 2016

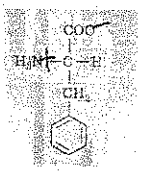
1. Does the following amino acid contain an acidic, basic, polar or nonpolar side chain?



2. Draw the zwitterion form of the following amino acid:

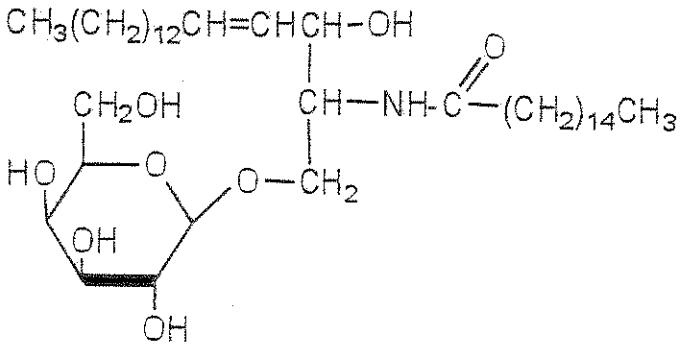


3. Construct a dipeptide VAL PHE from the amino acids shown below. Make sure to draw the dipeptide in the form it would take in your body (at physiological pH):



VAL PHE

4. Below is a lipid found in a cell membrane. CAREFULLY circle the parts of the lipid CANNOT participate in hydrogen bonding.



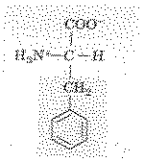
key

Name _____

Lab Instructor Belyayeva Malek Mollica

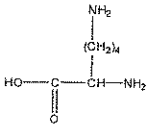
Quiz 6a
May 16, 2016

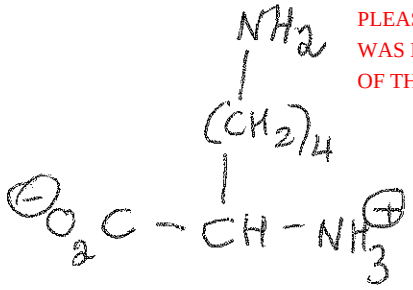
1. Does the following amino acid contain an acidic, basic, polar or nonpolar side chain?



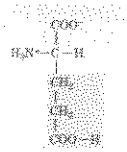
PLEASE IGNORE THIS QUESTION. IT WAS NOT A GOOD QUIZ QUESTION (CUZ OF THE SIDE CHAIN)

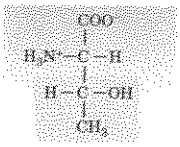
2. Draw the zwitterion form of the following amino acid:



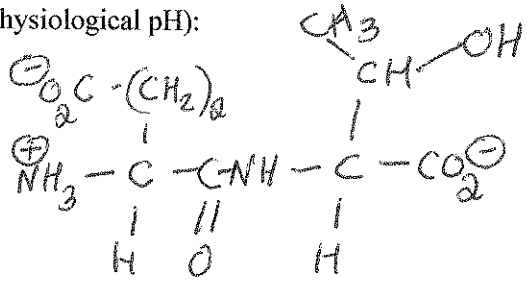


3. Construct a dipeptide GLU SER from the amino acids shown below. Make sure to draw the dipeptide in the form it would take in your body (at physiological pH):

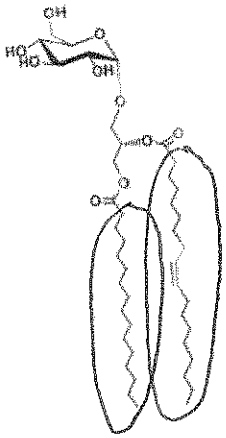




GLU SER



4. Below is a lipid found in a cell membrane. CAREFULLY circle the parts of the lipid CANNOT participate in hydrogen bonding.

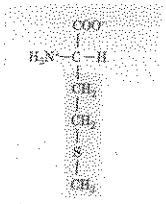


Name _____

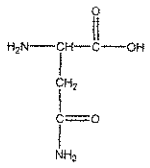
Lab Instructor Belyayeva Malek Mollica

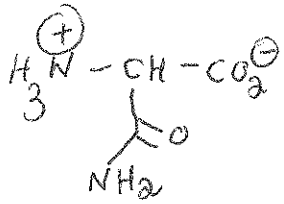
Quiz 6b
May 16, 2016

1. Does the following amino acid contain an acidic, basic, polar or nonpolar side chain?

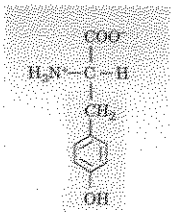


2. Draw the zwitterion form of the following amino acid:

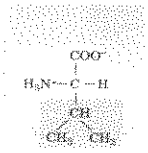




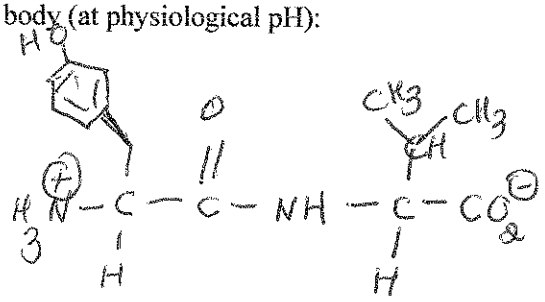
3. Construct a dipeptide TYR VAL from the amino acids shown below. Make sure to draw the dipeptide in the form it would take in your body (at physiological pH):



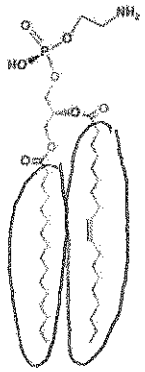
TYR



VAL



4. Below is a lipid found in a cell membrane. CAREFULLY circle the parts of the lipid CANNOT participate in hydrogen bonding.

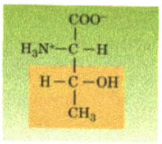


Name _____

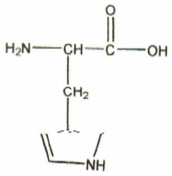
Lab Instructor Belyayeva Malek Mollica

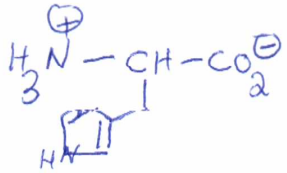
Quiz 6c
May 16, 2016

1. Does the following amino acid contain an acidic, basic, polar or nonpolar side chain?

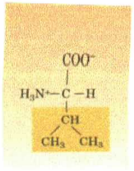


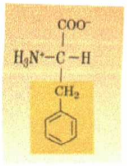
2. Draw the zwitterion form of the following amino acid:



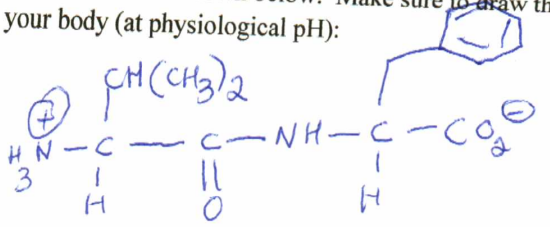


3. Construct a dipeptide VAL PHE from the amino acids shown below. Make sure to draw the dipeptide in the form it would take in your body (at physiological pH):





VAL PHE



4. Below is a lipid found in a cell membrane. CAREFULLY circle the parts of the lipid CANNOT participate in hydrogen bonding.