

Sp2008 Org II Quiz #1 Ch 14-16 (20 questions for 20 points)

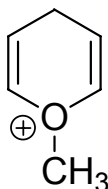
NAME: _____

If you object to your graded script being placed in a box outside my office then check here _____

(1-10) are True or False.

- 1) *Aromaticity* is a term used to describe very stable σ bonding in certain special molecules.
- 2) Conjugated π systems involve the sideways overlap of adjacent and aligned p orbitals.

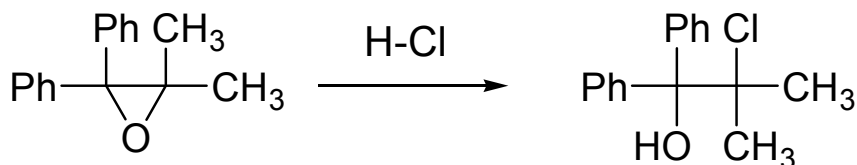
3)



is aromatic

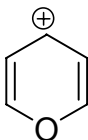
- 4) Kinetic products are the products that are formed most quickly.

5)



- 6) One of the lone pairs on the Oxygen atom in Furan is located in an sp^2 hybrid orbital.

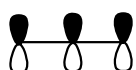
7)



is aromatic

- 8) The *s-cis* conformation of a diene is required for Diels-Alder reactions to occur.

9)



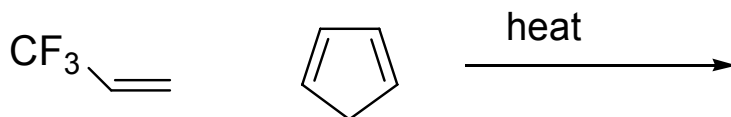
represents a π_1 molecular orbital for **Benzene**

10)

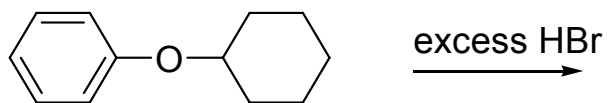
Alkene + peroxyacid \rightarrow epoxide + carboxylic acid

11-13) Give the products for the following reactions (and indicate stereo/regiochemistry where applicable).

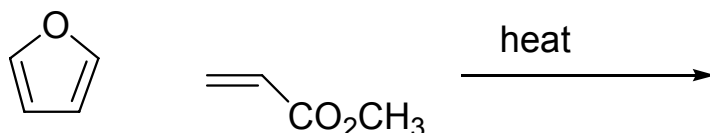
11)



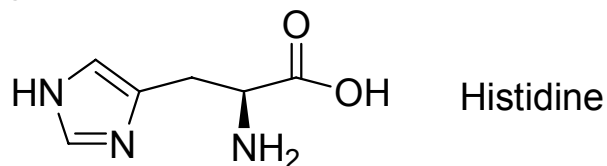
12)



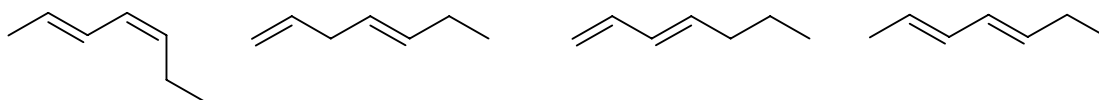
13)



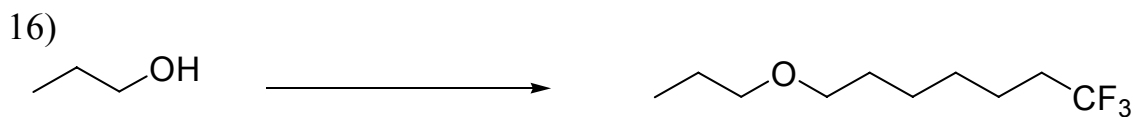
14) *Histidine* is a naturally occurring amino acid which contains a 6π aromatic heterocycle in its side chain. Indicate which of the Nitrogen atoms in the aromatic ring is **most basic**.



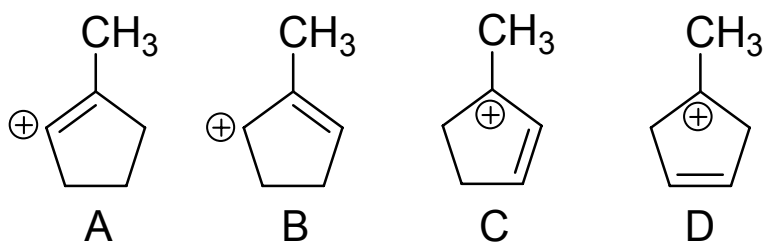
15) Circle the most stable isomer.



16-17) Provide reagents for the following reactions.



18-19) For the four following cations:



18) Which is the most stable ?

19) Which is the least stable ?

20) Draw a carbocation that would be stable in aqueous solution.

BONUS QUESTION for 1 extra point

Draw the product (or products) of the reaction between bromine and 1,3-cyclohexadiene which takes place in the dark.

NAME: DOUGLAS S. HALFULL

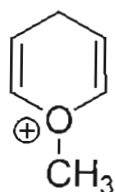
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1) *Aromaticity* is a term used to describe very stable σ bonding in certain special molecules. F

2) Conjugated π systems involve the sideways overlap of adjacent and aligned p orbitals. T

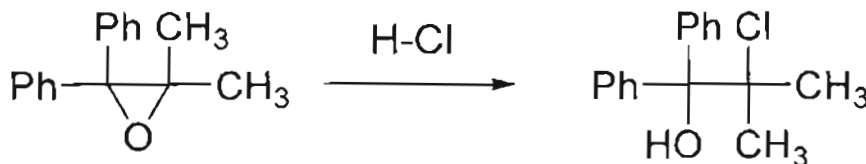
3)



is aromatic F

4) Kinetic products are the products that are formed most quickly. T

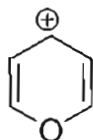
5)



F

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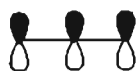
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represents a π_1 molecular orbital for **Benzene**

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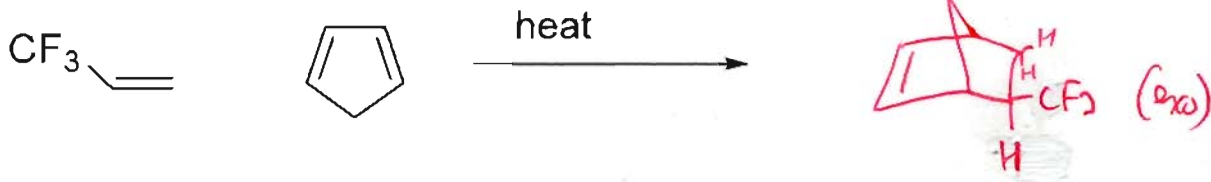
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Alkene + peroxyacid \rightarrow epoxide + carboxylic acid

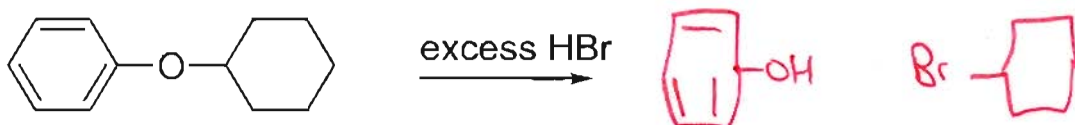
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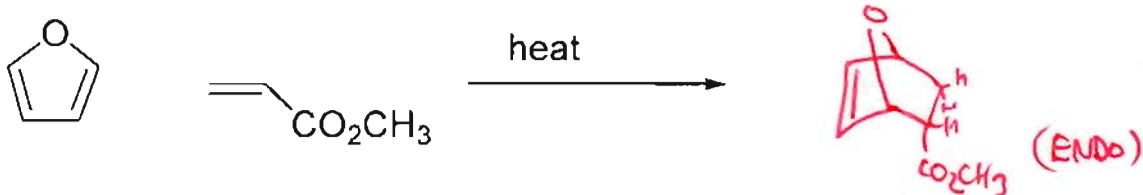
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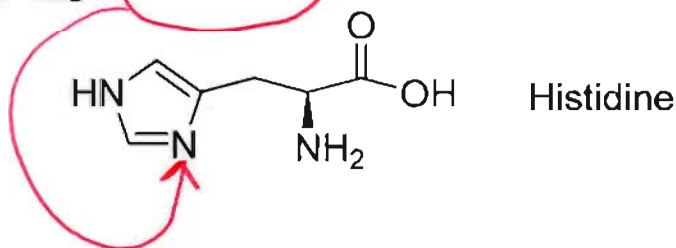
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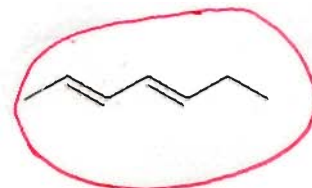
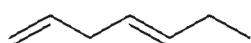
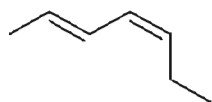
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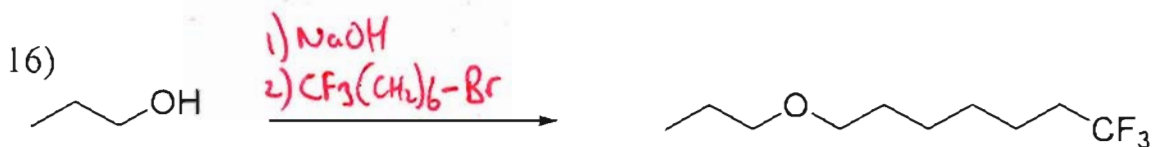
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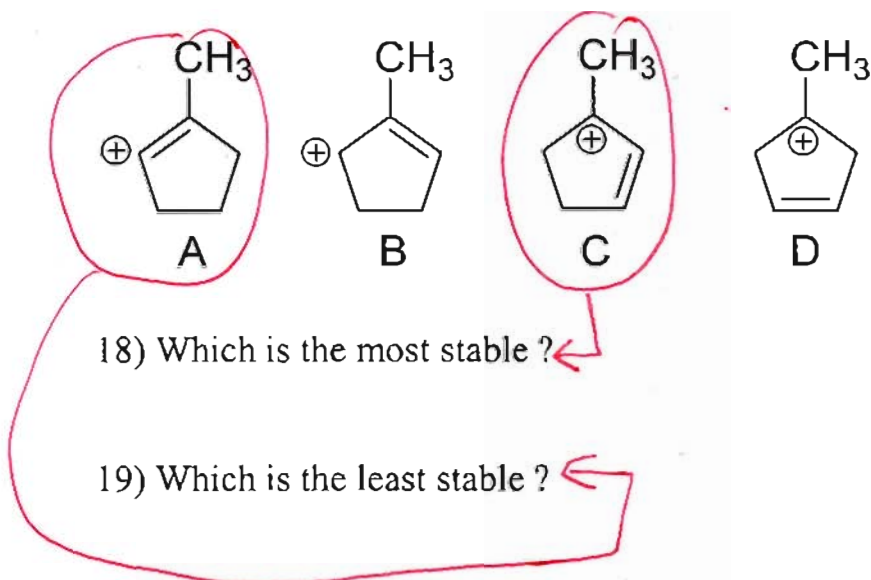
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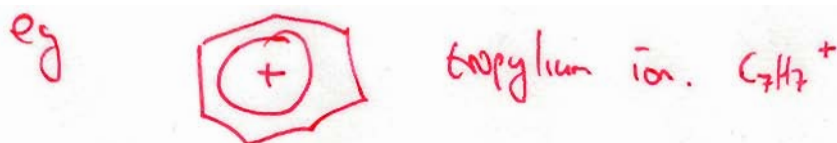


18-19) For the four following cations:



20) Draw a carbocation that would be stable in aqueous solution.

Needs to be very stable (aromatic)



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