

Sp2001 Org II Quiz #1 Ch 14-16 (20 questions for 20 points)

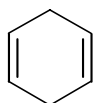
NAME: _____

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

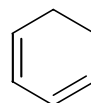
(1-10) are True or False.

- 1) Aromatic compounds are generally more stable than antiaromatic compounds.
- 2) Cyclohexane has more ring strain than an epoxide.
- 3) Cyclobutadiene has more π bonds than butadiene.
- 4) Kinetic products are always formed faster than thermodynamic products.

5)

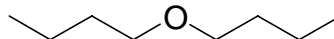


is more stable than

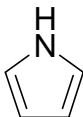


6)

The oxygen atom in this ether is sp^3 hybridized

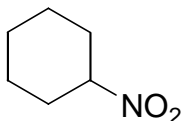


7)



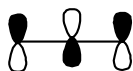
is aromatic

8)



is aromatic

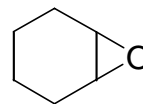
9)



represents π_1 for an allylic Molecular Orbital

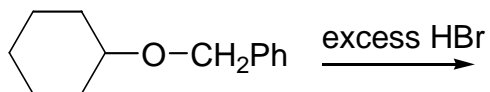
10)

The oxygen atom in this epoxide is sp^3 hybridized

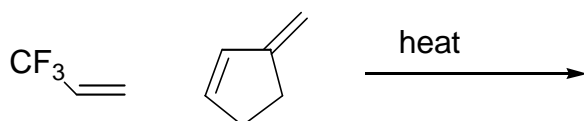


11-14) Give the products for the following reactions (and indicate stereo/regiochemistry where applicable).

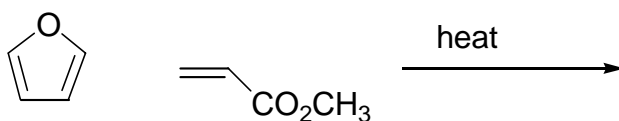
11)



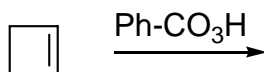
12)



13)



14)



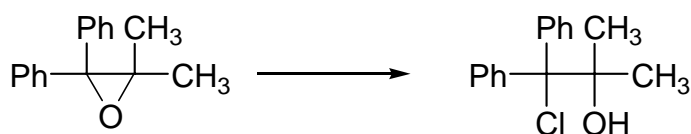
15) How many pairs of degenerate π molecular orbitals are found in the MO description of benzene?

16-18) Give reagents and conditions for the following transformations.

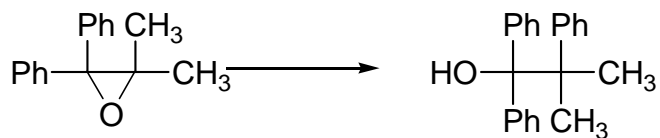
16)



17)

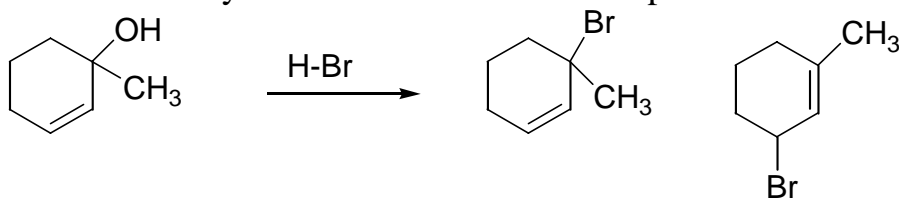


18)



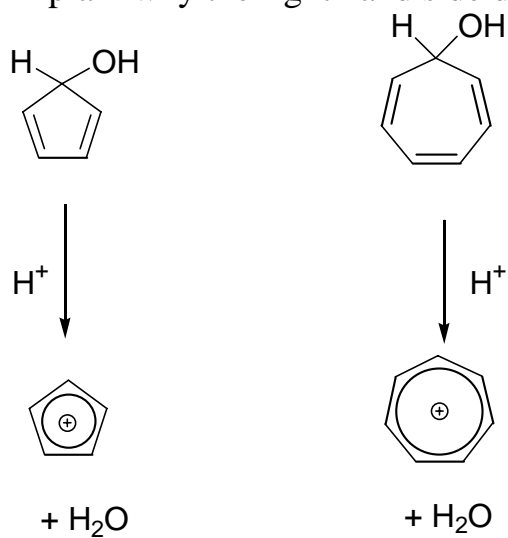
19-20)

Mechanistically account for both observed products in the below reaction.



BONUS QUESTION for 1 extra point

Explain why the right hand side dehydration proceeds much more quickly.



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NAME: _____

TYRONE SHULACES

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(1-10) are True or False.

1) Aromatic compounds are generally more stable than antiaromatic compounds. T

2) Cyclohexane has more ring strain than an epoxide. F

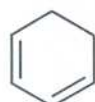
3) Cyclobutadiene has more π bonds than butadiene. F

4) Kinetic products are always formed faster than thermodynamic products. T

5)



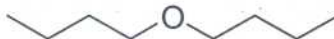
is more stable than



F

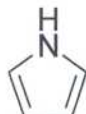
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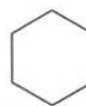
7)



is aromatic

T

8)



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F

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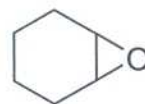


represents π_1 for an allylic Molecular Orbital

F

10)

The oxygen atom in this epoxide is sp^3 hybridized



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11-14) Give the products of the following reactions (and indicate stereo/regiochemistry where applicable).

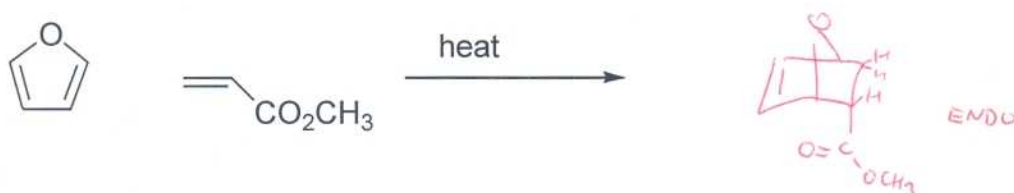
11)



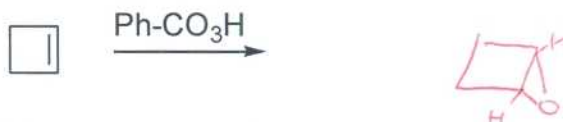
12)



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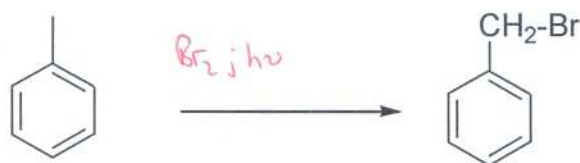


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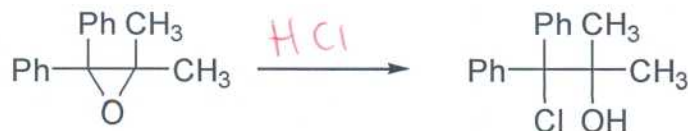
2

16-18) Give reagents and conditions for the following transformations.

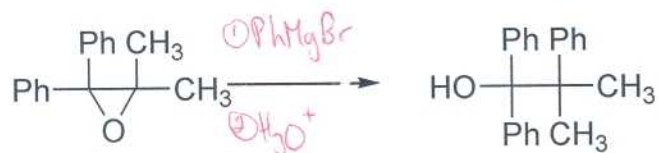
16)



17)

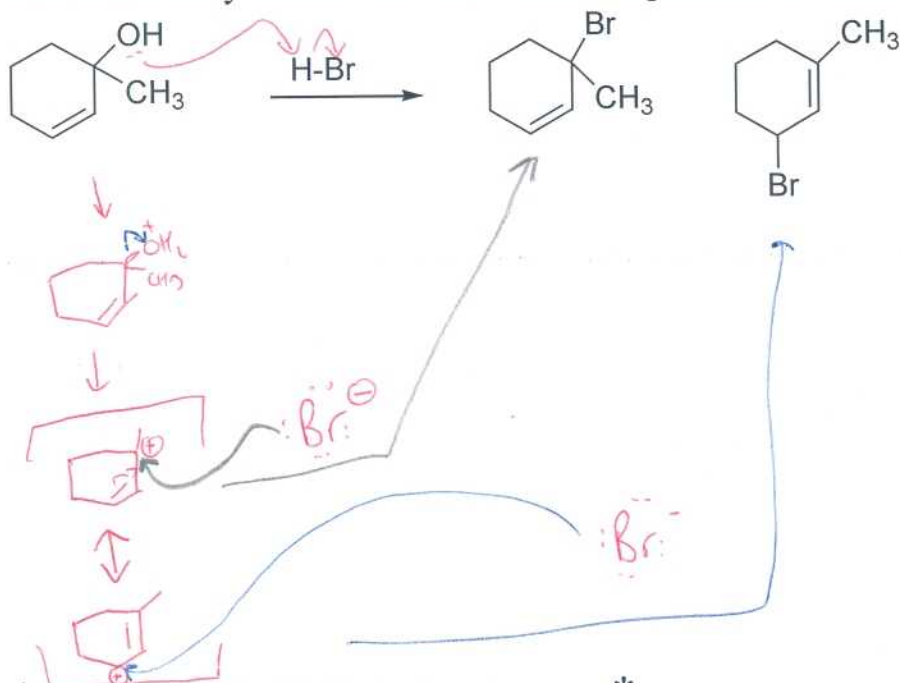


18)



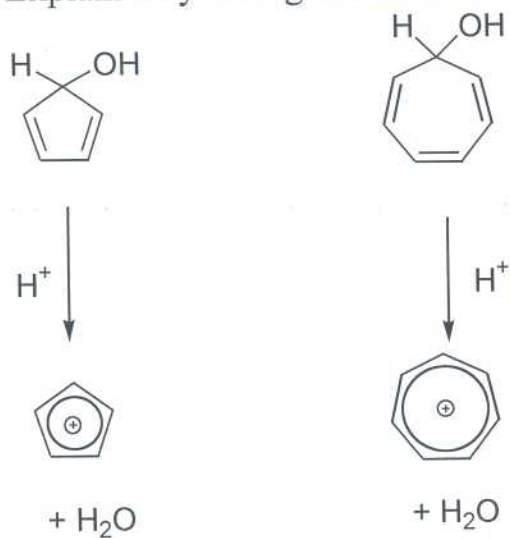
19-20)

Mechanistically account for both observed products in the below reaction.



BONUS QUESTION for 1 extra point

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It leads to an AROMATIC cation.