

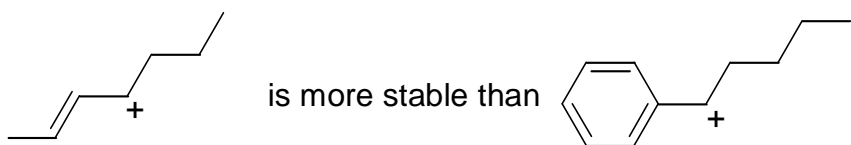
Organic II Quiz #2 Ch 17 (20 questions for 20 points).

NAME: _____

(1-10) are True or False.

- 1) Benzene is a 6π Hückel aromatic compound.
- 2) Conversion of benzene to nitrobenzene proceeds via nucleophilic aromatic substitution.
- 3) Ortho substitution means a 1,4 arrangement on a benzene ring.
- 4) The formation of the sigma complex for an electrophilic aromatic substitution is the rate determining step.
- 5) Reduction of phenols generates quinones.
- 6) Birch reduction reaction conditions involve sodium metal, in an alcoholic solution of ammonia.
- 7) Oxidative cleavage of ethylbenzene with hot, basic potassium permanganate produces a benzoic acid potassium salt.
- 8) Fluorine is a meta directing, deactivating substituent for electrophilic aromatic substitution

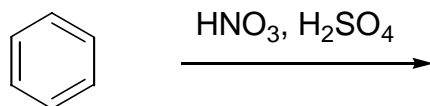
9)



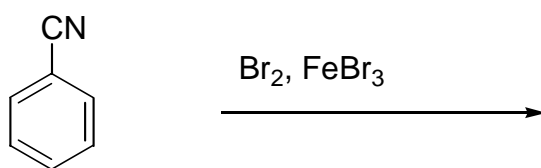
- 10) Catalysts such as AlCl_3 and FeBr_3 act as Lewis acids since they are lone pair acceptors.

11-15) Give the products for the following reactions (and indicate stereo/regiochemistry where applicable).

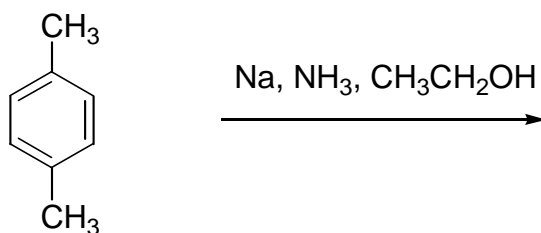
11)



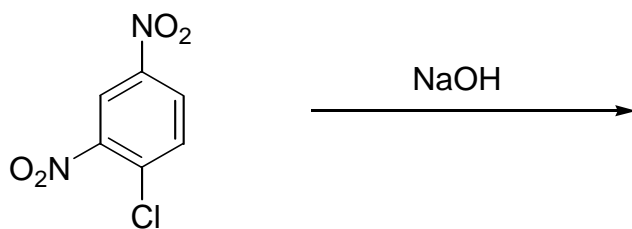
12)



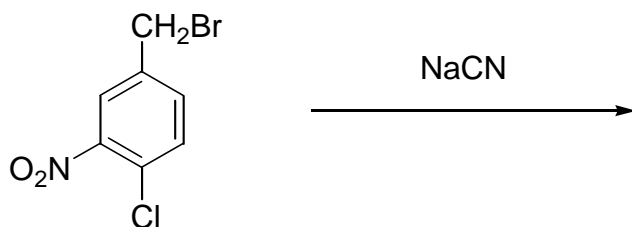
13)



14)



15)

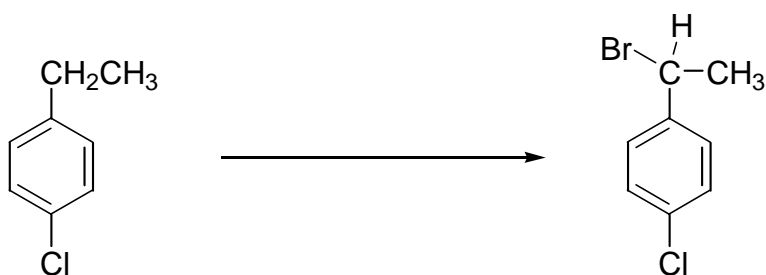


16-20) Give reagents and conditions for the following transformations.

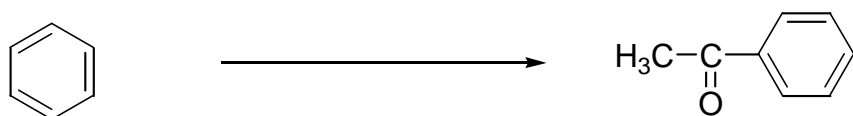
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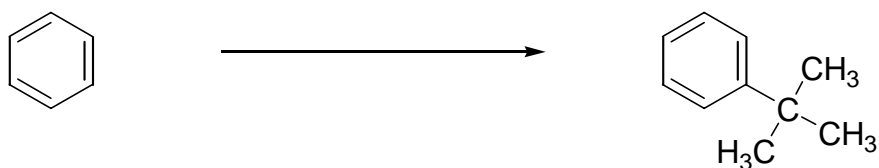
17)



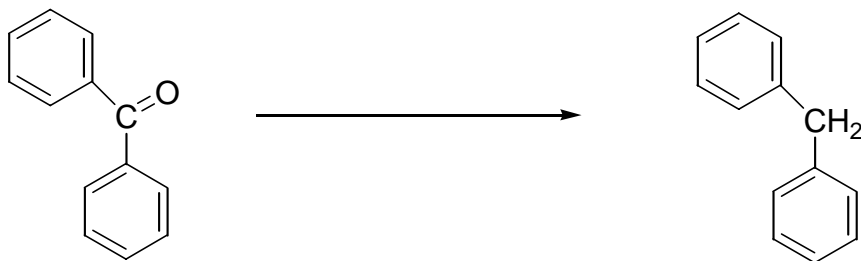
18)



19)



20)



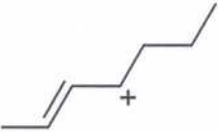
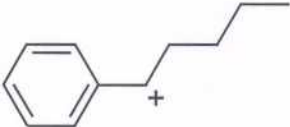
BONUS QUESTION for 1 extra point (1/2 each)

Draw a Lewis structure for benzyne (lines for bonds, dots for lone pairs), and label the hybridization of each carbon.

Organic II Quiz #2 Ch 17 (20 questions for 20 points).

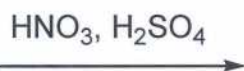
NAME: Annie Leen

(1-10) are True or False.

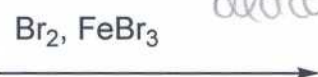
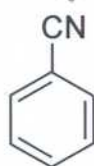
- 1) Benzene is a 6π Hückel aromatic compound. T
- 2) Conversion of benzene to nitrobenzene proceeds via nucleophilic aromatic substitution. F
- 3) Ortho substitution means a 1,4 arrangement on a benzene ring. F
- 4) The formation of the sigma complex for an electrophilic aromatic substitution is the rate determining step. T
- 5) Reduction of phenols generates quinones. F
- 6) Birch reduction reaction conditions involve sodium metal, in an alcoholic solution of ammonia. T
- 7) Oxidative cleavage of ethylbenzene with hot, basic potassium permanganate produces a benzoic acid potassium salt. T
- 8) Fluorine is a meta directing, deactivating substituent for electrophilic aromatic substitution. F
- 9)  is more stable than  F
- 10) Catalysts such as AlCl_3 and FeBr_3 act as Lewis acids since they are lone pair acceptors. T

11-15) Give the products for the following reactions (and indicate stereo/regiochemistry where applicable).

11)



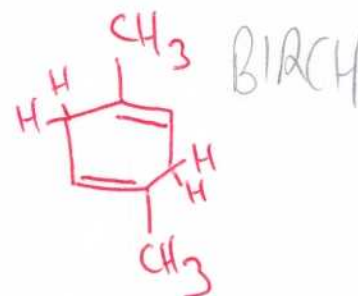
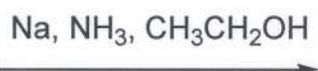
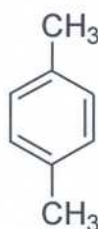
12)



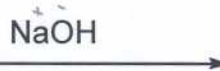
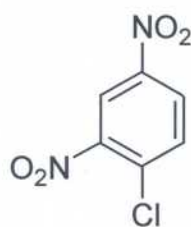
Meta director



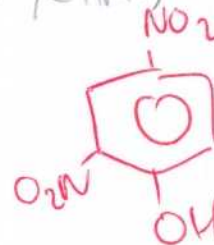
13)



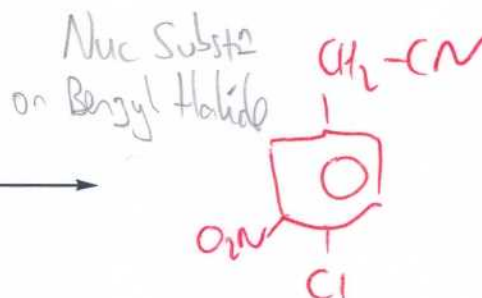
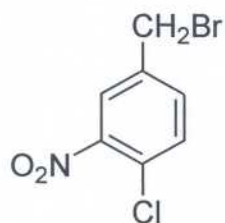
14)



N.A.S. (Add = /Elim =)

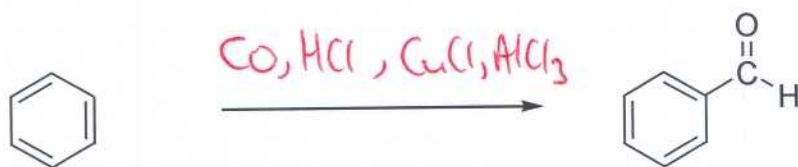


15)



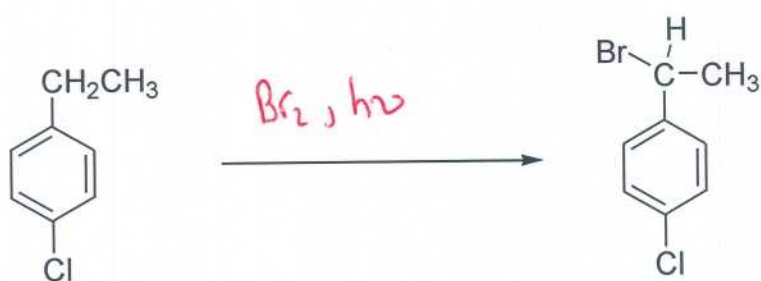
16-20) Give reagents and conditions for the following transformations.

16)



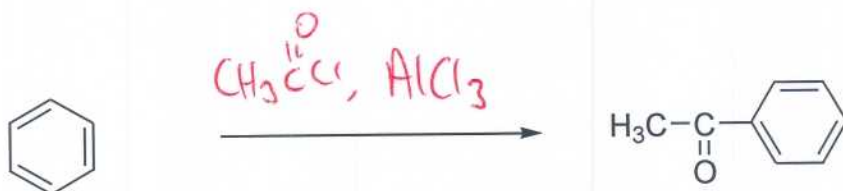
Gatterman
Koch

17)



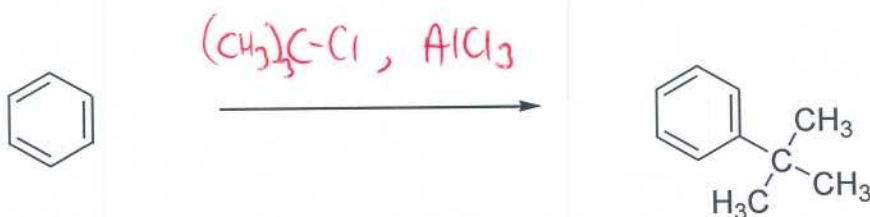
Free Radical
Bromination

18)



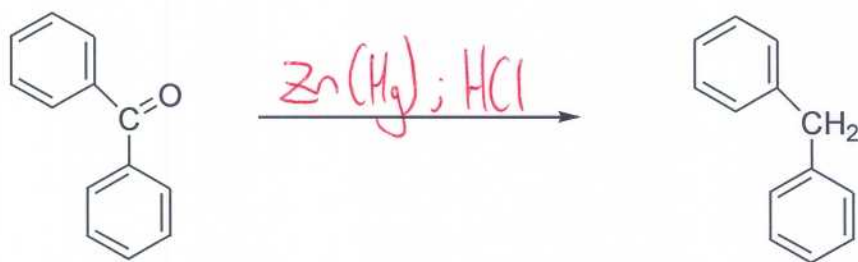
F.C acylation

19)



FC alkylation

20)



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