

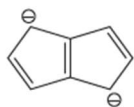
Chapter 8

Structure Reactivity Correlations and Organic Reaction Mechanisms

1. Which of the following statements are TRUE for borazine and benzene?
(A) They are isoelectronic
(B) Both are aromatic
(C) Both undergo addition reactions
(D) Both undergo substitution reactions
2. Which of the following reagents use in the whole reaction sequence to convert toluene to *p*-chlorobenzoic acid?
(A) $\text{Cl}_2/\text{FeCl}_3$
(B) Hot KMnO_4/H^+
(C) Cl_2/light
(D) *N*-Chlorosuccinimide

3. Of the following, the compounds that are aromatic are

(A)



(B)



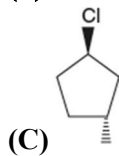
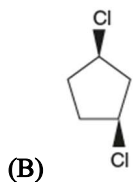
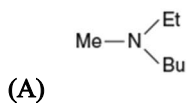
(C)

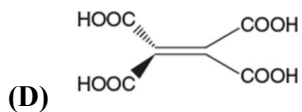


(D)

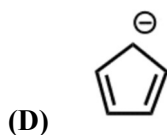
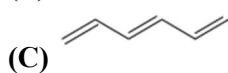
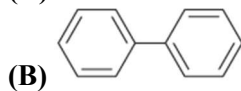
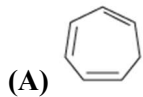


4. Which of the following compounds can have enantiomers?

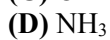
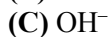
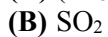
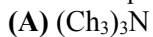




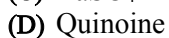
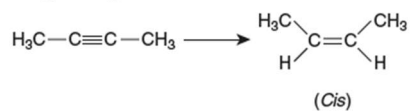
5. Which of the following are aromatic?



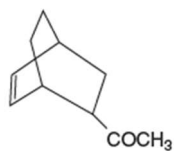
6. The nucleophile among the following are



7. The reagent that can be used for the conversion.



8. For the synthesis of

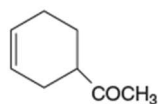


using Diel's-Alder reactions, the reactants required as

(A)



(B)



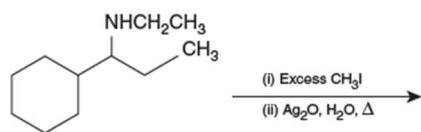
(C)



(D)

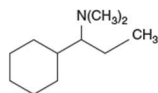


9. The major products of the reaction

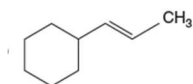


are

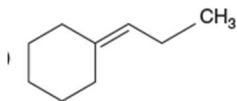
(A)



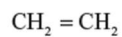
(B)



(C)



(D)



10. Electrophile among the following are

- (A) NH_3
- (B) NO_2
- (C) BF_3
- (D) I_2

Answer

- 1. (A), (B), (D)
- 2. (A), (B)
- 3. (A), (D)
- 4. (A), (C), (D)
- 5. (B), (D)
- 6. (A), (C), (D)

7. (A), (C), (D)
8. (C), (D)
9. (A), (D)
10. (B), (C), (D)