

Lakshya NEET (2025)

Organic Chemistry

DPP: 10

Haloalkanes and Haloarenes

Q1 Aryl halides are less reactive toward nucleophilic substitution reaction as compared to alkyl halides due to

- (A) The formation of less stable carbanion
- (B) Resonance stabilization of aryl halides
- (C) Longer-carbon halogen bond
- (D) Inductive effect

Q2 Haloarenes are ortho and para-directing due to:

- (A) Resonance in aryl halide
- (B) -I effect of the halogen atom
- (C) +I effect of the halogen atom
- (D) Both (A) and (B)

Q3 Chlorobenzene on fusing with solid NaOH followed by acidification gives

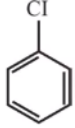
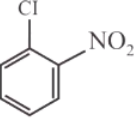
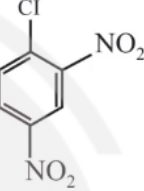
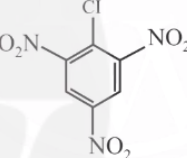
- (A) Benzene
- (B) Benzoic acid
- (C) Phenol
- (D) Benzene chloride

Q4 Aryl halides cannot be prepared by the reaction of aryl alcohols with PCl_3 , PCl_5 or SOCl_2 because

- (A) Phenols are highly stable compounds
- (B) Carbon-oxygen bond in phenols has a partial double bond character
- (C) Carbon-oxygen bond is highly polar
- (D) All of these

Q5 Which of the following compounds undergoes replacement of $-\text{Cl}$ by $-\text{OH}$ by merely

warming the compound with aqueous NaOH ?

- (A) 
- (B) 
- (C) 
- (D) 

Q6 On sulphonation of $\text{C}_6\text{H}_5\text{Cl}$;

- (A) m-chlorobenzenesulphonic acid formed
- (B) Benzenesulphonic acid is formed
- (C) o-chlorobenzenesulphonic acid is formed
- (D) o- and p-chlorobenzenesulphonic acid is formed

Q7 Aryl halides are extremely less reactive towards nucleophilic substitution than alkyl halides. Which of the following accounts for this?

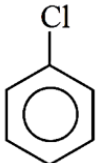
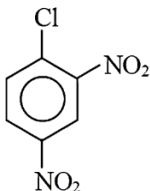
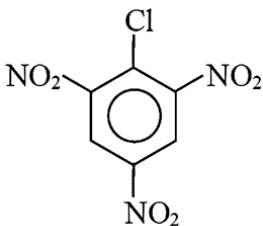
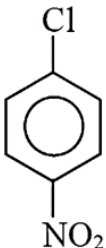
- (i) Due to resonance in aryl halides.
- (ii) In alkyl halides carbon atom in C-X bond is sp^2 hybridised whereas in aryl halides carbon atom in C - X bond is sp^3 hybridized
- (iii) Due to the stability of phenyl cation



(iv) Due to possible repulsion there are fewer chances of nucleophile to approach electron rich arenes.

- (A) (i), (ii) and (iv)
 (B) (i), (ii) and (iii)
 (C) (i) and (iv)
 (D) (ii), (iii) and (iv)

Q8 Which of the following compound gives fastest S_N2 Ar reaction?

- (A) 
- (B) 
- (C) 
- (D) 

Q9 Benzene reacts with n-propyl chloride in the presence of anhydrous $AlCl_3$ to give predominantly

- (A) n-propyl benzene
 (B) benzene
 (C) 3-propyl-1-chlorobenzene
 (D) Cumene

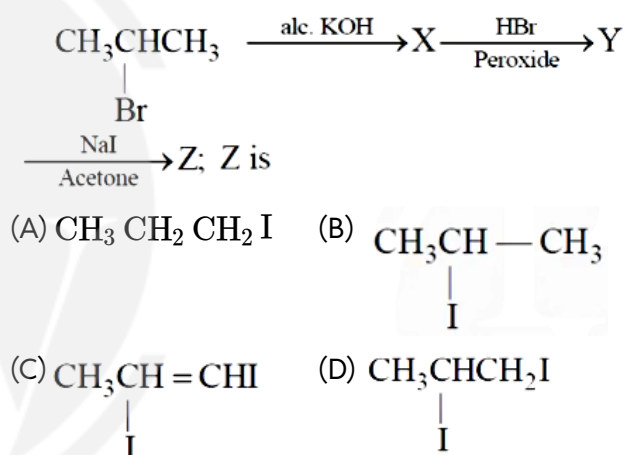
Q10 Chlorobenzene is formed by the reaction of chlorine with benzene in the presence of $AlCl_3$. Which of the following species attacks the benzene ring in this reaction?

- (A) Cl^-
 (B) Cl^+
 (C) $AlCl_3$
 (D) $[AlCl_4]^-$

Q11 The reagent used in the Gattermann reaction for the preparation of aryl halide

- (A) CCl_4
 (B) HBF_4
 (C) Cu/HCl
 (D) HNO_2

Q12 - In the reaction



Answer Key

Q1 (B)
Q2 (A)
Q3 (C)
Q4 (B)
Q5 (D)
Q6 (D)

Q7 (C)
Q8 (C)
Q9 (D)
Q10 (B)
Q11 (C)
Q12 (A)



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