



Class 12 Chemistry | Haloalkanes And Haloarenes

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. Aqueous KOH converts bromoethane mainly into:

- A. Ethanal B. Ethane C. Ethanol D. Ethene

2. Hot alcoholic KOH converts bromoethane mainly into:

- A. Ethane B. Ethanoic acid C. Ethanol D. Ethene

3. Which substrate undergoes SN1 most readily under comparable conditions?

- A. $(\text{CH}_3)_3\text{CBr}$ B. $\text{CH}_3\text{CH}_2\text{CH}_2\text{Br}$
C. $\text{CH}_3\text{CH}_2\text{Br}$ D. CH_3Br

4. Which substrate undergoes SN2 fastest with the same nucleophile?

- A. $\text{CH}_3\text{CH}_2\text{Br}$ B. $(\text{CH}_3)_2\text{CHBr}$
C. CH_3Br D. $(\text{CH}_3)_3\text{CBr}$

5. An SN2 reaction at a chiral carbon normally gives:

- A. Complete retention
B. Only racemisation
C. Inversion of configuration
D. No stereochemical change possible

6. Chlorobenzene is less reactive than chloroethane toward ordinary nucleophilic substitution due to:

- A. An sp^3 ring carbon
B. Partial C-Cl double-bond character
C. Absence of chlorine lone pairs
D. Pure ionic C-Cl bond

7. Which is an allylic halide?

- A. $\text{C}_6\text{H}_5\text{Cl}$ B. $\text{CH}_2=\text{CHCl}$
C. $\text{CH}_3\text{CH}_2\text{Cl}$ D. $\text{CH}_2=\text{CHCH}_2\text{Cl}$

8. Which is a vinylic halide?

- A. $\text{CH}_2=\text{CHCH}_2\text{Cl}$ B. $\text{CH}_2=\text{CHCl}$
C. $\text{C}_6\text{H}_5\text{CH}_2\text{Cl}$ D. CH_3Cl

9. Bromoethane with Mg in dry ether forms:

- A. $\text{C}_2\text{H}_5\text{MgBr}$ B. C_2H_6 C. C_2H_4 D. $\text{C}_2\text{H}_5\text{OH}$

10. Why must Grignard preparation exclude water?

- A. Water forms extra C-C bonds
B. Water increases boiling point
C. Water prevents Mg oxidation only
D. Water destroys the reagent

11. CH_3Br with NaI in dry acetone is an example of:

- A. Friedel-Crafts reaction
B. Wurtz reaction
C. Sandmeyer reaction
D. Finkelstein reaction

12. Two molecules of CH_3Br with sodium in dry ether mainly give:

- A. Methane B. Ethane C. Propane D. Ethene

13. The SN1 rate law for a suitable alkyl halide RX is:

- A. $\text{Rate} = k[\text{RX}]^2$ B. $\text{Rate} = k[\text{RX}][\text{OH}^-]$
C. $\text{Rate} = k[\text{RX}]$ D. $\text{Rate} = k[\text{OH}^-]^2$

14. Among alkyl halides with identical R, the best leaving group is usually:

- A. Cl^- B. I^- C. F^- D. Br^-

15. Which molecule has a chiral carbon?

- A. 2-Bromopropane B. Bromomethane
C. 1-Bromobutane D. 2-Bromobutane

ANSWER KEY — check after completing all 15 questions

1.C 2.D 3.A 4.C 5.C 6.B 7.D 8.B 9.A 10.D 11.D 12.B 13.C 14.B 15.D

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