

31. Halogen compounds

31.1 Halogen compounds

Paper 4

Question Paper

- 1 (a) Describe the difference in reactivity between chloroethane and chlorobenzene with $\text{OH}^-(\text{aq})$.

Explain your answer.

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..... [2]

- 2 Benzene, C_6H_6 , is an aromatic molecule.

- (c) Chlorobenzene and chloroethane have different reactivities in nucleophilic substitution reactions.

- (i) Identify a suitable reagent to illustrate this difference in reactivity.

The reagent chosen should give **visibly** different results with chlorobenzene and chloroethane.

..... [1]

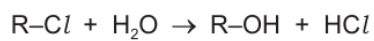
- (ii) Write equations to describe any reactions that occur.

[1]

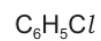
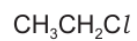
- (iii) Explain the difference in the reactivities of chlorobenzene and chloroethane in nucleophilic substitution reactions.

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..... [1]

- 3 (a)** Organochlorine compounds can undergo hydrolysis.



State and explain the relative rates of hydrolysis of the following compounds.



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..... [3]