

Unit Practice Test

for Board Examination

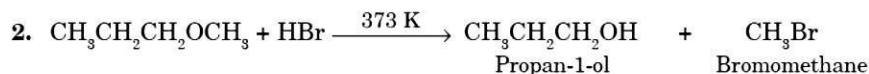
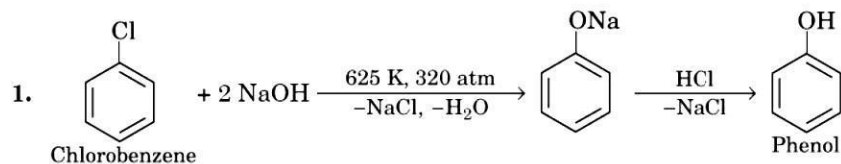
Time allowed : 2 Hrs.

Maximum Marks : 35

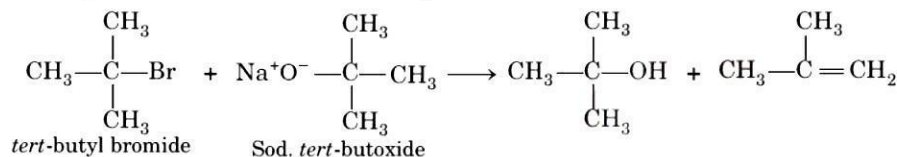
1. Write chemical equation for the preparation of phenol from chlorobenzene. (1)
2. Predict the products of the reaction :
 $\text{CH}_3\text{CH}_2\text{CH}_2\text{OCH}_3 + \text{HBr} \longrightarrow$ (1)
3. Why di-tert-butyl ether cannot be prepared by Williamson's synthesis? Explain. (1)
4. Which of the two: phenol or o-nitrophenol are more acidic and why? (1)
5. What is the order of reactivity of 1°, 2° and 3° alcohols with sodium metal? (1)
6. Write the reactions and conditions involved in the conversion of
(i) Propene to propan-1-ol (ii) Phenol to salicylic acid. (2)
7. Write the IUPAC names of the following :
(i)  (ii) $\text{CH}_3\text{CH}_2\text{OCH}(\text{CH}_3)\text{CH}_2\text{CH}_3$ (2)
8. Write mechanism of acid dehydration of ethanol to give ethene. (2)
9. Which of the two : $\text{C}_6\text{H}_5\text{OH}$ or $\text{C}_2\text{H}_5\text{OH}$ is more acidic and why? (2)
10. Cyclic $\text{C}_4\text{H}_7\text{OH}$ has five isomers. Write their structures and names. (2)
11. Write the equations involved in the following reactions :
(i) Kolbe's reaction
(ii) Reimer-Tiemann reaction
(iii) Williamson ether synthesis (3)
12. Write chemical equations for the following reactions :
(i) Friedel Craft's acylation of anisole
(ii) Bromination of phenol
(iii) Sulphonation of phenol. (3)
13. Give chemical tests to distinguish between
(a) Methanol and ethanol
(b) 1-Propanol and 2-Propanol
(c) n-Propyl chloride and iso-propyl chloride (3)
14. How will you convert the following :
(i) Propene to propan-2-ol
(ii) Phenol to benzoic acid
(iii) Propan-1-ol to propan-2-ol (3)
15. Explain
(i) Ethers possess dipole moment even if the alkyl radicals in the molecule are identical.
(ii) Boiling points of ethers are lower than their corresponding alcohols.
(iii) Ethers are relatively inert. (3)
16. (a) Explain how an -OH group attached to a carbon in the benzene ring activates benzene towards substitution ?
(b) Discuss the oxidation of 1°, 2° and 3° alcohols.
(c) Explain hydroboration reaction with an example. (2,2,1)

► To check your performance, see HINTS AND SOLUTIONS TO SOME QUESTIONS at the end of Part II of the book.

UNIT 11 : ALCOHOLS, PHENOLS AND ETHERS

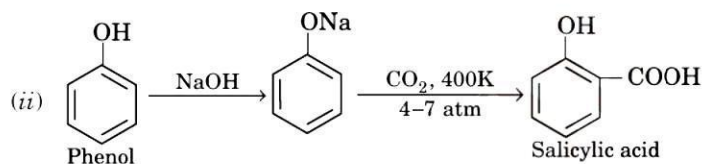
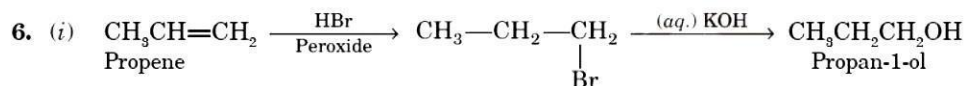


3. To prepare di-tert-butyl ether by Williamson's synthesis, we require tert-butyl bromide and sodium tert-butoxide. Since tert-butyl bromide is a 3° alkyl halide, it prefers to undergo elimination rather than substitution reaction. Therefore, isobutylene is obtained as the product rather than di-tert butyl ether.



4. *o*-Nitrophenol

5. $1^\circ > 2^\circ > 3^\circ$



7. (i) 2, 5-Dimethylphenol

- (ii) 2-Ethoxybutane

9. Phenol, $\text{C}_6\text{H}_5\text{OH}$ is more acidic than ethanol because of greater resonance stability of phenoxide ion than phenol.

