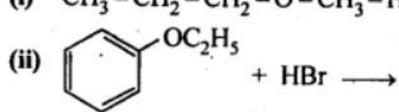
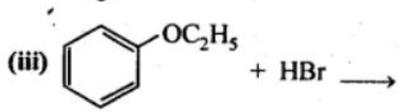
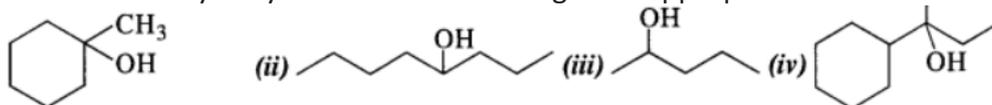


Test Paper Class-12 | Chapter– Alcohols , Phenols & Ethers | Marks 35 | Time- 1.5 h

- 1 What is the correct order of acidity of alcohols? 1
 (a) $1^\circ > 2^\circ > 3^\circ$
 (b) $2^\circ > 3^\circ > 1^\circ$
 (c) $1^\circ > 3^\circ > 2^\circ$
 (d) $3^\circ > 2^\circ > 1^\circ$
- 2 Which of the following alcohols produce turbidity immediately when reacted with conc. HCl and $ZnCl_2$? 1
 (a) Methanol
 (b) Tert-butyl alcohol
 (c) Isopropanol
 (d) n-propanol
- 3 On treatment with excess bromine water, phenol gives 1
 (a) o-bromophenol and p-bromophenol
 (b) 2,4-dibromophenol
 (c) m-bromophenol
 (d) 2,4,6-tribromophenol
- 4 The reagent used for converting ethanol to acetic acid is 1
 (a) Pyridinium chlorochromate (PCC)
 (b) Chromic anhydride
 (c) Acidified potassium permanganate
 (d) Sulphuric Acid
- 5 The reagent used for the formation of 1-Phenylethanol from benzaldehyde is 1
 (a) Methyl bromide and aluminium chloride
 (b) Methyl iodide
 (c) Ethyl iodide and magnesium
 (d) Methyl bromide and magnesium (Grignard reagent)
- 6 Write the equations involved in the following reactions: 2
 (i) Reimer-Tiemann reaction
 (ii) Kolbe's reaction
- 7 Predict the products of the following reactions: 4
 (i) $CH_3-CH_2-CH_2-O-CH_3-HBr \rightarrow$
 (ii)  $+ HBr \rightarrow$
 (iii)  $+ HBr \rightarrow$
 (iv) $(CH_3)_3C-OC_2H_5 \xrightarrow{HI}$
- 8 While separating a mixture of ortho and para nitrophenols by steam distillation, name the isomer which will be steam volatile. Give reason 1
- 9 Give the equations of the reaction for the preparation of phenol from cumene 1
- 10 Write the mechanism of hydration of ethene to yield ethanol 3
- 11 How are the following conversions carried out? 4



- (i) Propane \rightarrow Propan-2-ol
 (ii) Benzyl chloride \rightarrow Benzyl alcohol
 (iii) Ethyl mag. chloride \rightarrow Propan-1-ol
 (iv) Methyl mag. bromide \rightarrow 2-Methylpropan-2-ol.
- 12** Illustrate with examples the limitations of Williamson synthesis for the preparation of certain types of ethers. **2**
- 13** Write the mechanism of the reaction of HI with methoxymethane **2**
- 14** Which is more acidic in ethanol and phenol and why? **3**
- 15** Show how will you synthesise the following from appropriate alkenes **4**



Assertion And Reasoning

Directions: These questions consist of two statements, each printed as Assertion and Reason. While answering these questions, you are required to choose any one of the following four responses.

- (a) If both Assertion and Reason are correct and the Reason is a correct explanation of the Assertion.
- (b) If both Assertion and Reason are correct but Reason is not a correct explanation of the Assertion.
- (c) If the Assertion is correct but Reason is incorrect.
- (d) If both the Assertion and Reason are incorrect.

- 1** Assertion : Reimer-Tiemann reaction of phenol with CCl_4 in NaOH at 340 K gives salicylic acid as the major product. **1**
 Reason : The reaction occurs through intermediate formation of dichlorocarbene.
- 2** Assertion : In case of phenol, bromination takes place even in absence of Lewis acid whereas bromination of benzene takes place in presence of Lewis acid like FeBr_3 . **1**
 Reason : $-\text{OH}$ group attached to benzene ring is highly deactivating.
- 3** Assertion : *tert*-Butyl methyl ether is not prepared by the reaction of *tert*-butyl bromide with sodium methoxide. **1**
 Reason : Sodium methoxide is a strong nucleophile
- 4** Assertion : With HI, anisole gives iodobenzene and methyl alcohol. **1**
 Reason : Iodide ion combines with smaller group to avoid steric hindrance