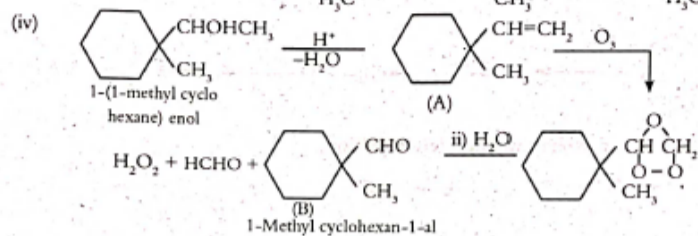
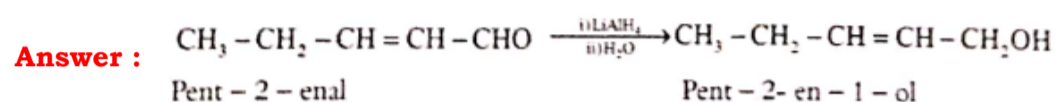


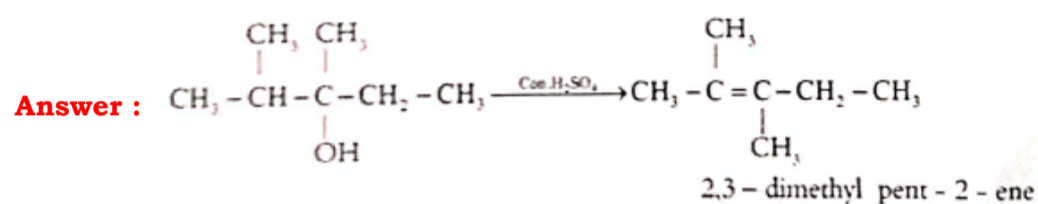
Answer :



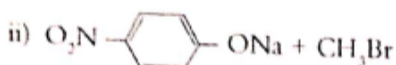
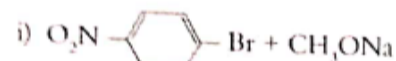
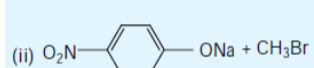
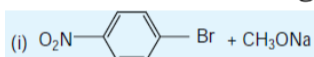
7) Suggest a suitable carbonyl compound for the preparation of pent-2-en-1-ol using LiAlH_4 .



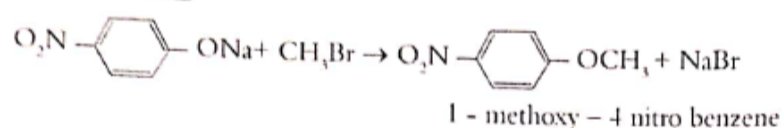
8) What is the major product obtained when 2,3-dimethylpentan-3-ol is heated in the presence of H_2SO_4 .



9) Which of the following set of reactants will give 1-methoxy-4-nitrobenzene.

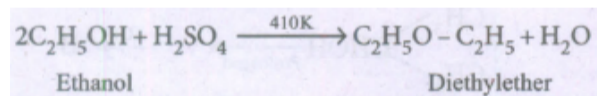


Answer :

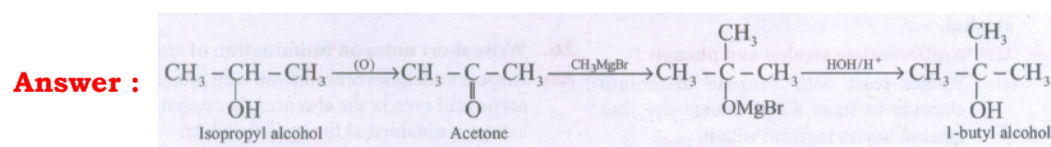


10) How will you convert $\text{C}_2\text{H}_5\text{OH}$ to $\text{C}_2\text{H}_5\text{OC}_2\text{H}_5$?

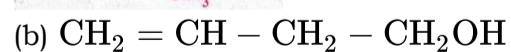
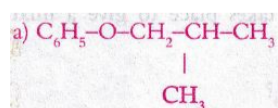
Answer : When $\text{C}_2\text{H}_5\text{OH}$ (Ethanol) is treated with conc. H_2SO_4 at 410 K, intermolecular dehydration takes place and the product formed will be diethyl ether $\text{C}_2\text{H}_5-\text{O}-\text{C}_2\text{H}_5$.



11) How can isopropyl alcohols be converted to t-butyl alcohol?



12) Write the IUPAC name of the following compounds.



c) Neopentyl alcohol

d) Glycerol

Answer : a) 2-Methyl-1-phenoxypropane

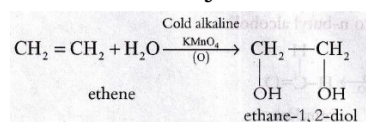
b) But-3-en-1-ol

c) 2,2-dimethylpropan-1-ol

d) Propane-1,2,3-triol

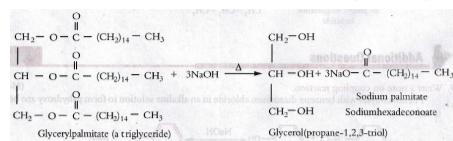
13) How is glycol prepared using Baeyer's reagent?

Answer : Ethylene reacts with cold alkaline solution of potassium permanganate (Baeyer's reagent) gives ethylene glycol.



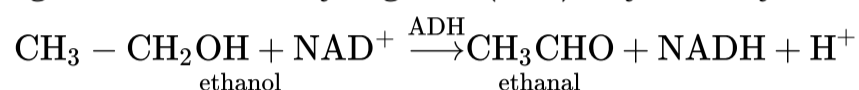
14) Write a note on Saponification.

Answer : The alkaline hydrolysis of natural fats or a triglyceride gives soap and glycerol. This is known as Saponification.



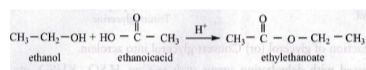
15) Write a note on Biological oxidation.

Answer : The fermentation of the food consumed by an animal produces alcohol. To detoxify the alcohol, the liver produces an enzyme called alcohol dehydrogenase (ADH). Nicotinamide adenine dinucleotide (NAD) present in the animals act as a oxidizing agent and alcohol dehydrogenase (ADH) enzyme catalyses the oxidation of toxic alcohols into non-toxic aldehydes.



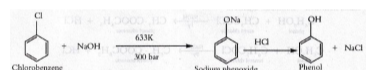
16) What is esterification? Give an example.

Answer : Alcohols react with carboxylic acids in the presence of an acid to give esters.



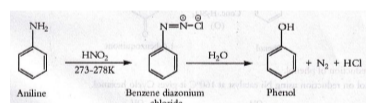
17) What is Dow's Process?

Answer : When Chlorobenzene is hydrolyzed with 6-8 % NaOH at 300 bar and 633 K, in a closed vessel. Sodium Phenoxide is formed which on treatment with dilute HCl gives phenol.



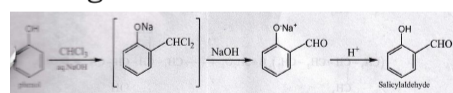
18) How is phenol obtained from aniline?

Answer : Aniline is diazotized with nitrous acid (NaNO₂+HCl) at 273-278 K to give benzene diazonium chloride which on further treatment with hot water in the presence of mineral acid gives phenol.



19) What is Riemier - Tiemann reaction?

Answer : On threating Phenol with CHCl₂ / NaOH a - CHO group is introduced at ortho position. This reaction proceeds through substituted benzel chloride intermediate.



20) Write the uses of phenol.

- Answer :**
1. About half of world production of phenol is used for making phenol form aldehyde resin (Bakelite).
 2. Phenol is a starting material for the preparation of drugs such as phenacetin, Salol, Aspirin etc, phenolphthalein indicator and explosive like picric acid.
 3. It is used as an antiseptic - Carbolic lotion and carbolic soaps.