CBSE Class 12 Chemistry Chapter 11 Alcohols, Phenols, and Ethers Worksheet – Set 2

Q1. Phosphorous pentachloride reacts with the ethanol to yield
(a) Ethylene chloride
(b) Ethyl chloride
(c) Both (a) and (b)
(d) None of the above

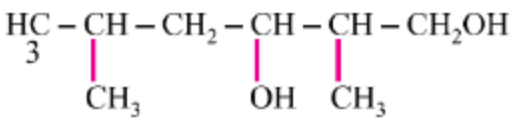
Q2. What is the electrolytic product of 20% aqueous sodium chloride solution and ethanol?
(a) Chloroform
(b) Ethyl chloride
(c) Formaldehyde
(d) None of the above

Q3. Which of the following will give a positive iodoform test?
(a) 1-pentanal
(b) 2-pentanone
(c) 3-pentanal
(d) None of the above

Q4. What happens when ethanol reacts with methyl magnesium bromide?
(a) Methane
(b) Ethane
(c) Propane
(d) None of the above

Q5. What is the molecular formula of chloral hydrate?
(a) $CCl_3CH(OH)_2$
(b) CCl_3COCH_3
(c) CCl_3COCCl_3
(d) None of the above

Q6. Write the IUPAC name of the below-mentioned compound.



Q7. Convert aniline to phenol.

Q8. Why is phenol acidic in nature?

Q9. Name a compound which is used as an antiseptic as well as a disinfectant.

Q10. What is a nitrating mixture?

Q11. Why is lower alcohol soluble in water while higher alcohol is insoluble in water?

Q12. What will happen if ethanol is heated with red phosphorous and hydroiodic acid?

Q13. Convert ethanol to ethene.

Q14. What is ether? Why are they used as a solvent?

Q15. What is power alcohol?

Q16. Why does phenol not give protonation reactions readily?

Q17. Why is ether inert?

Q18. Why is dehydration of alcohol carried out with sulphuric acid and not nitric acid or hydrochloric acid?

Q19. An alcohol A ($C_4H_{10}O$) on oxidation with acidified $K_2Cr_2O_7$ gives carboxylic acid B ($C_4H_8O_2$). Compound A when dehydrated with concentrated H_2SO_4 at 443 K gives compound C with aqueous H_2SO_4. C gives compound D ($C_4H_{10}O$) which is an isomer of A. Compound D is resistant to oxidation but compound A can be easily oxidized. Identify A, B, C and D and write their structure.

Q20. An ether A ($C_5H_{12}O$), when heated with excess of hot concentrated HI, produced two alkyl halides which on hydrolysis gives compounds B and C. Oxidation of B gives an acid D, whereas oxidation of C gives a ketone E. Deduce the structures of A, B, C, D and E.